

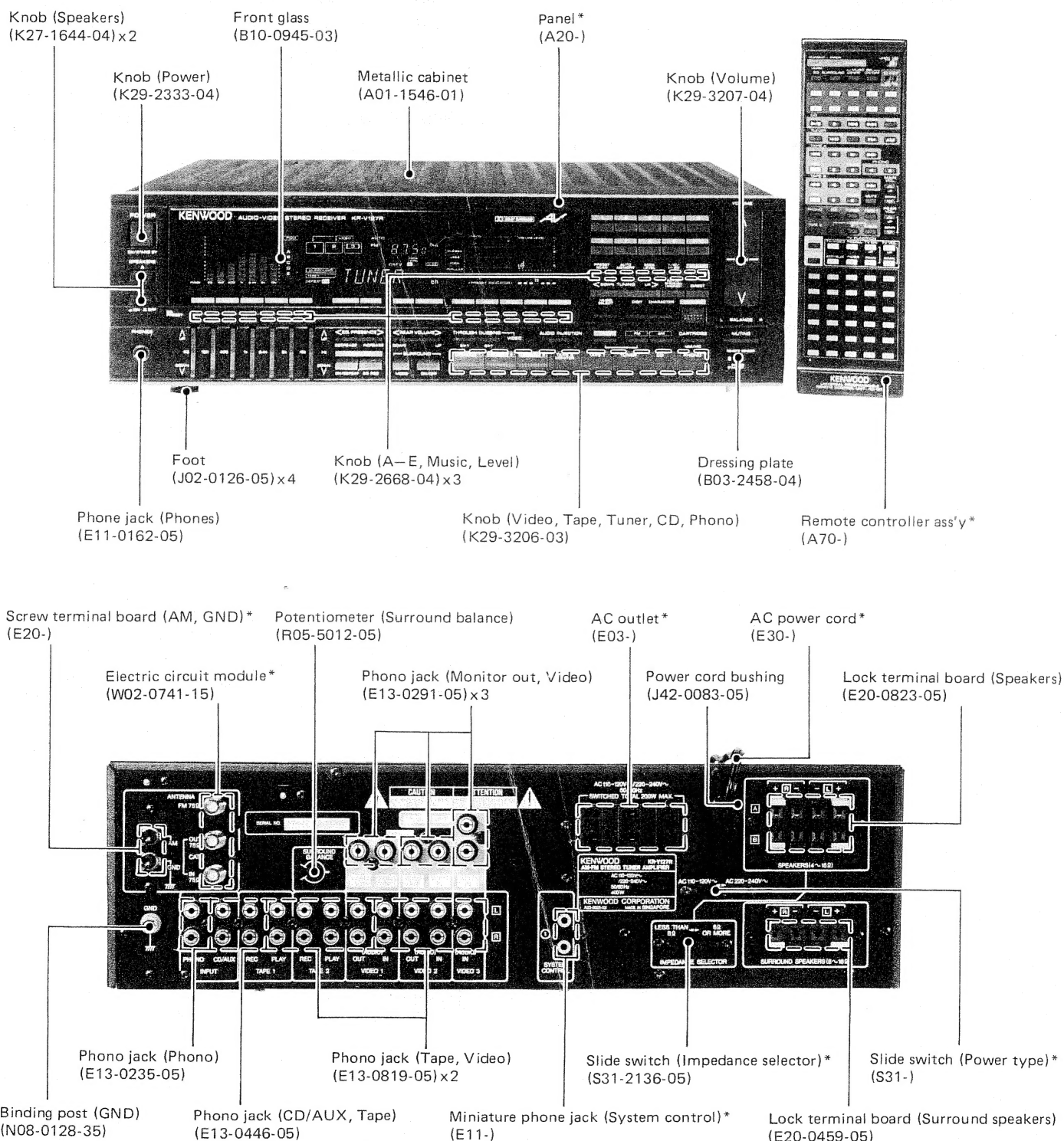
# AUDIO-VIDEO STEREO RECEIVER

# KR-V127R

# SERVICE MANUAL

# KENWOOD

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B51-3572-00 (O) 2424



\* Refer to parts list on page 5

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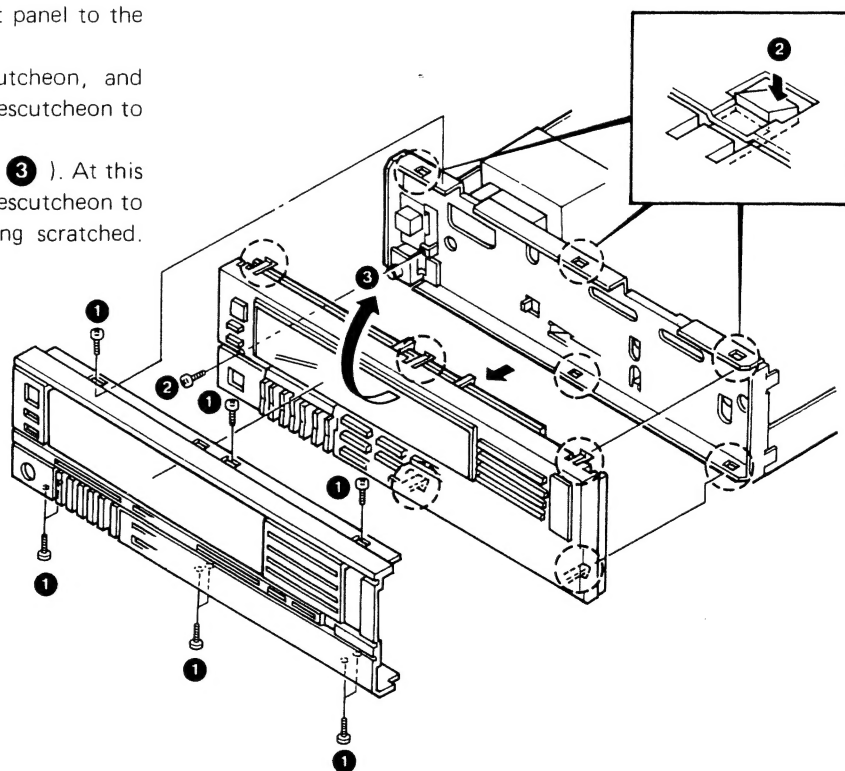
### WARNING

Lithium battery. Danger of Explosion if handled careless. May be replaced by trained personnel only according to the service manual.

### DISASSEMBLY FOR REPAIR

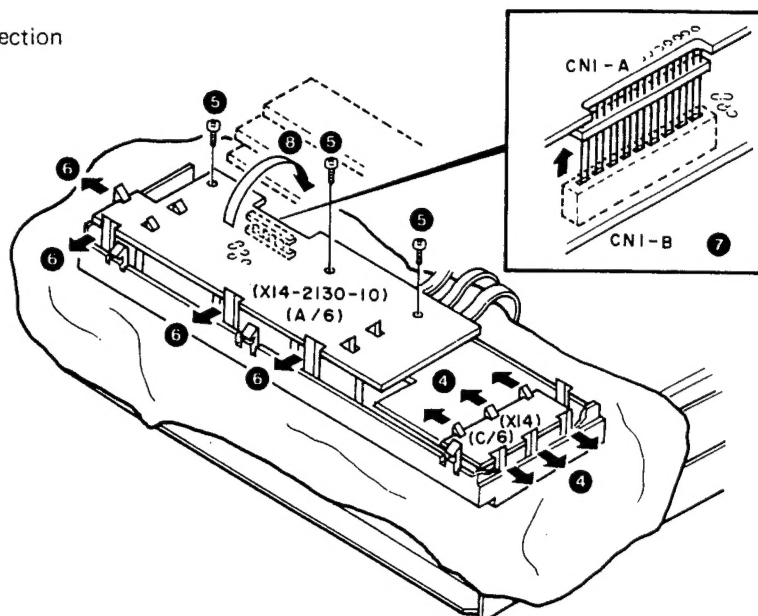
(Remove the metallic cabinet before performing the following operations.)

1. Remove the 9 screws retaining the front panel to the sub panel ( ① ).
2. Remove the screw on the panel escutcheon, and disengage the 5 claws retaining the panel escutcheon to the sub panel ( ② ).
3. Place the panel escutcheon on the unit ( ③ ). At this time, place a cloth, etc., below the panel escutcheon to protect the panel escutcheon from being scratched.

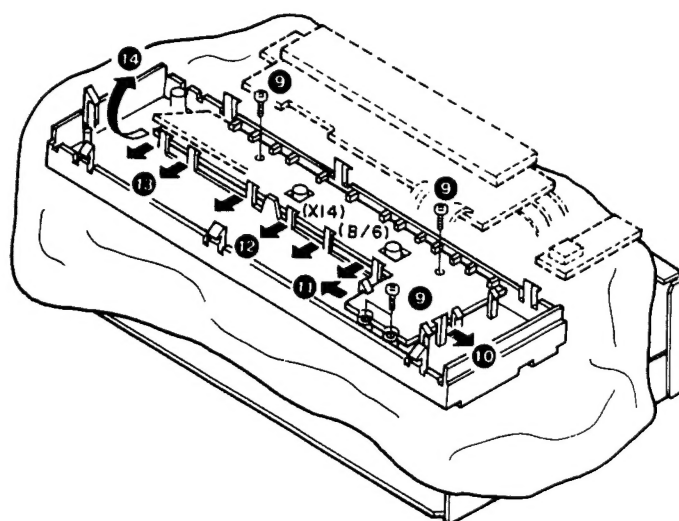


## DISASSEMBLY FOR REPAIR

4. Disengage the 6 claws retaining the Display Unit (X14-2130-10) (C/6) to the panel escutcheon ( 4 ).
5. Remove the 3 screws retaining the Display Unit (X14-) (A/6) to the panel escutcheon ( 5 ).
6. Disengage the 4 claws retaining the Display Unit (X14-) (A/6) to the panel escutcheon ( 6 ).
7. Disconnect the connector (CN1-A,B) which have been connected to the Display Unit (X14-) (A/6) and (X14-) (B/6) ( 7 ).
8. Place the Display Unit (X14-) (A/6) in the direction of the arrow ( 8 ).

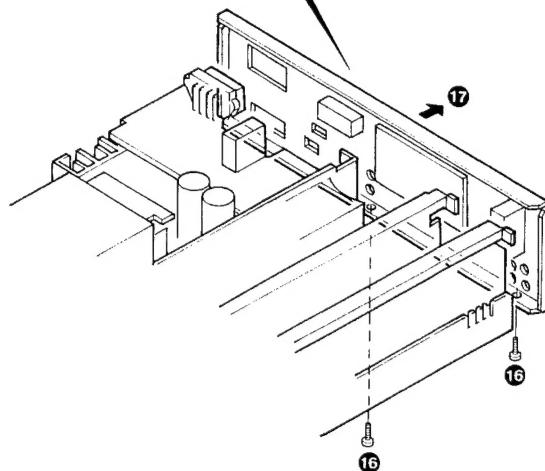
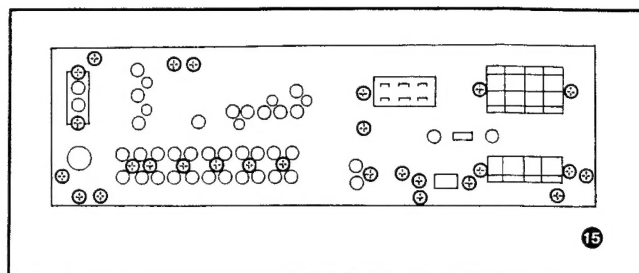


9. Remove the 4 screws retaining the Display Unit (X14-) (B/6) to the panel escutcheon ( 9 ).
10. Disengage the 8 claws retaining the Display Unit (X14-) (B/6) to the panel escutcheon. To facilitate this procedure, disengage the claws from right ( 10 ) to left ( 13 ).
11. Remove the Display Unit (X14-) (B/6) in the direction of the arrow ( 14 ).

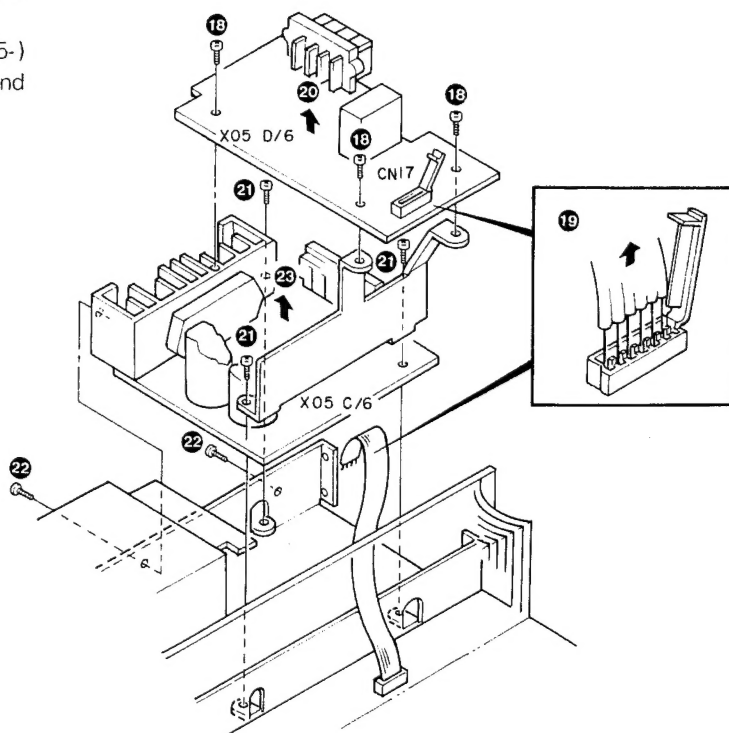


## DISASSEMBLY FOR REPAIR

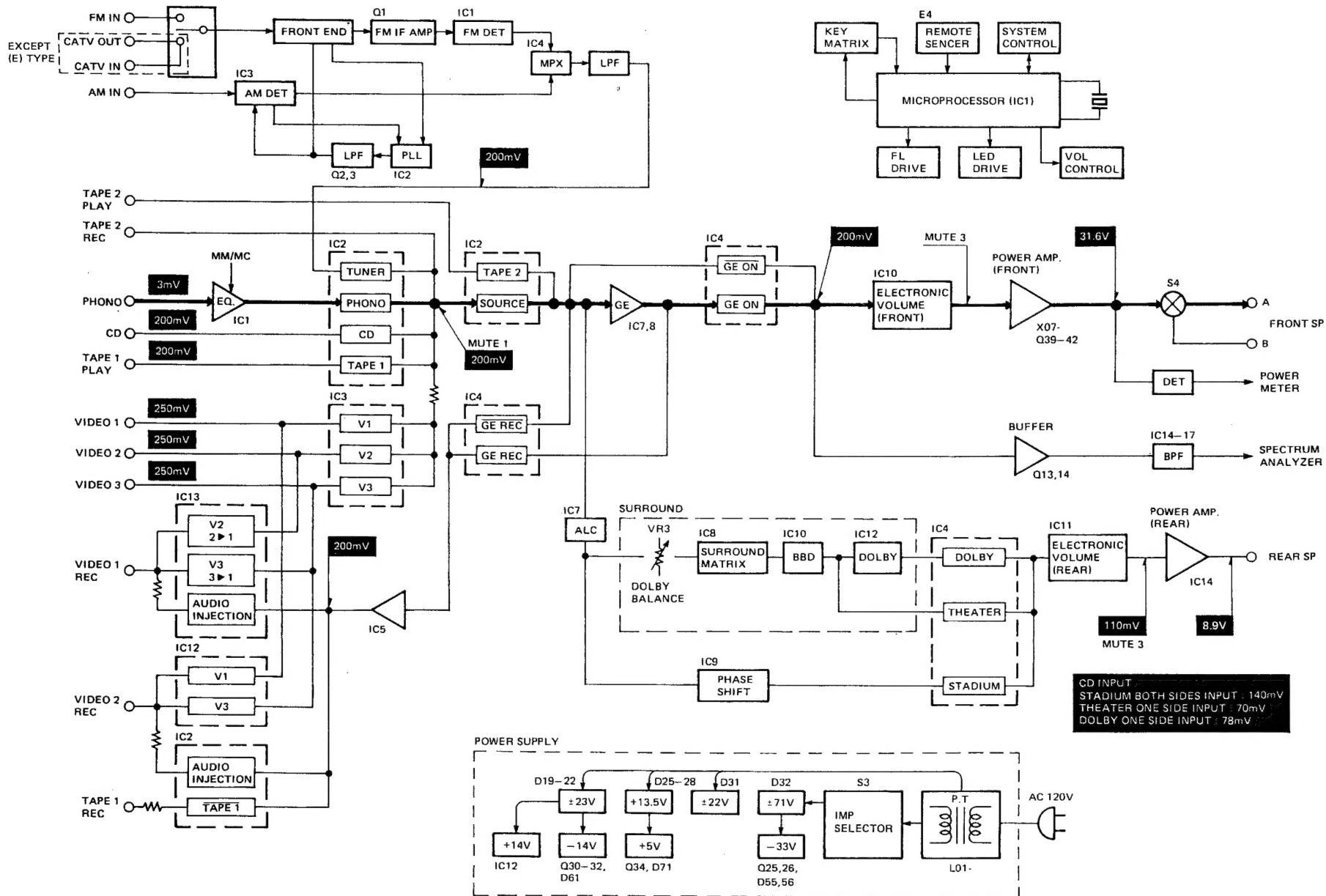
12. Remove 27 screws (15) from the rear panel and 2 screws (16) from the bottom plate and remove the rear panel in the direction of arrow (17).



13. Remove 3 screws (18), disconnect CN17 (19) from the PC board (X05-) (D/6) and remove the PC board (20).
14. Remove 3 screws (21) from the PC board (X05-) (C/6) and 2 screws (22) from the side panel and remove the PC board (23).



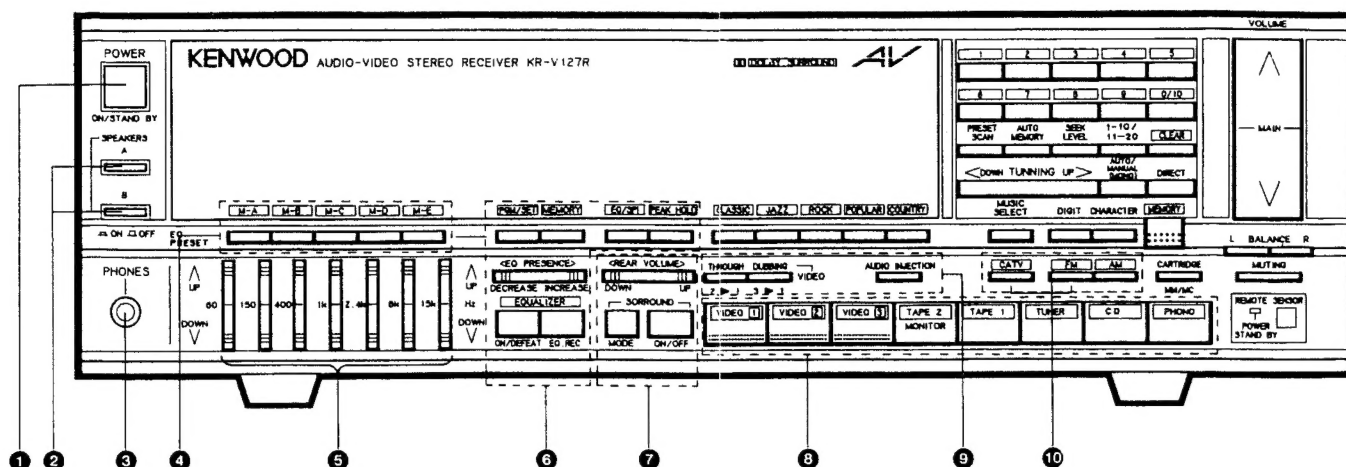




**BLOCK LEVEL DIAGRAM**

**KR-V127R**

## CONTROLS AND INDICATORS



### 1 POWER switch

Press this switch to turn on power. (The POWER STAND BY indicator lights.) Press it again to turn power off.

### 2 SPEAKERS A and B switches

**A,B OFF** – This position silences all speakers to permit private use of headphones.

**A ON** – Activates speakers connected to the SPEAKERS A terminals on the rear panel.

**B ON** – Activates speakers connected to the SPEAKERS B terminals on the rear panel.

**A,B ON** – Activates speakers connected to the SPEAKERS A and B terminals simultaneously.

#### Note:

When the SPEAKERS A and B switches are used at the same time, the speakers connected to the SPEAKERS A and B terminals are connected in series. In this respect, whenever using the SPEAKERS A and B switches at the same time, be sure that two pairs of speakers are connected to the terminals A and B, otherwise no sound is output.

### 3 PHONES jack

Stereo headphones are plugged into this jack.

### 4 EQ (Equalizer) PRESET keys

Use these keys to store equalizer curves in memory or to recall them.

**PGM:** User-adjusted equalizer curves can be programmed as desired and stored in memory; up to five patterns.

**SET:** Five factory-preset equalizer curves are stored in memory.

Up to 10 equalizer curve memories are available in total. Press the PGM/SET key to select either the user-programmed pattern or the factory-preset pattern.

### 5 Equalizer level controls

Adjust these controls up and down to equalize the sound by  $\pm 12$  dB to the center frequency indicated.

### 6 Equalizer function keys

#### • EQUALIZER key

Press this key to ON and the frequency characteristic will be modified by passing through the graphic equalizer. In the DEFEAT position, the frequency characteristic remains unchanged.

#### • EQ REC key

Used when recording the source onto the tape deck through the equalized response of the graphic equalizer.

#### • EQ PRESENCE controls

Adjust these controls (INCREASE and DECREASE) to boost or attenuate the equalizer curve indicated.

#### • PEAK HOLD ON/OFF key

In the spectrum analyzer display (SPI) mode, pressing this key activate or deactivate the Peak Hold function of the power meter indicator.

#### • EQ/SPI key

Pressing this key alternates the display mode between the EQ (graphic equalizer) and SPI (spectrum peak indicator-spectrum analyzer).

#### • Equalizer preset MEMORY key

This key is used to store an equalizer curve into the PGM PRESET memories. First, select the desired equalizer curve and then press this key. Then press any of the PRESET (A to E) keys. The selected equalizer curve will be stored in the memory indicated by the PRESET key pressed.

#### • PGM/SET key

Pressing this key alternates the preset equalizer curves to be recalled between PGM (user-programmed patterns) and SET (factory-preset patterns) groups.

## CONTROLS AND INDICATORS

### 7 Surround function keys

#### ● SURROUND MODE switch

Select the desired surround mode with this switch when the SURROUND ON/OFF switch is set to ON. Each time this switch is pressed, DOLBY, THEATER or STADIUM surround mode is selected in turn cyclical.

This becomes the recall function when the surround function is not displayed. When this key is pressed with the surround function displayed, the mode is changed.

#### ● SURROUND ON/OFF switch

Press this switch to activate or deactivate the surround output.

#### ● REAR VOLUME controls

Adjusts front/rear balancing when surround speakers are used. The control range is  $\pm 20$  dB of the front speaker level.

### 8 Input selectors

**VIDEO 1** – Selects the video recorders connected to the VIDEO 1 jacks.

**VIDEO 2** – Select the video recorders connected to the VIDEO 2 jacks.

**VIDEO 3** – Select the video recorders connected to the VIDEO 3 jacks.

**TAPE 1** – Press this switch to play back a tape deck connected to TAPE 1 jacks.

**TAPE 2** – Press this switch to play back a tape deck connected to the TAPE 2 jacks. (The TAPE-2 switch is operated in priority to any other audio input systems.)

**TUNER** – Selects the tuner mode.

**CD** – Selects the source connected to the CD/AUX jacks.

**PHONO** – Selects the program source played on the turntable.

### 9 Video function keys

#### ● THROUGH DUBBING [3] ► [1] key

This activate the through dubbing from VIDEO 3 to VIDEO 1.

#### ● THROUGH DUBBING [2] ► [1] key

This activate the through dubbing from VIDEO 2 to VIDEO 1.

#### **Note:**

Pressing the THROUGH DUBBING keys twice will resume the previous mode.

#### ● AUDIO INJECTION switch

Press this switch ON when replacing the sound of VIDEO 1, 2 with that of AUDIO source.

### 10 Band selectors

#### ● CATV ON/OFF switch (KR-V127R)

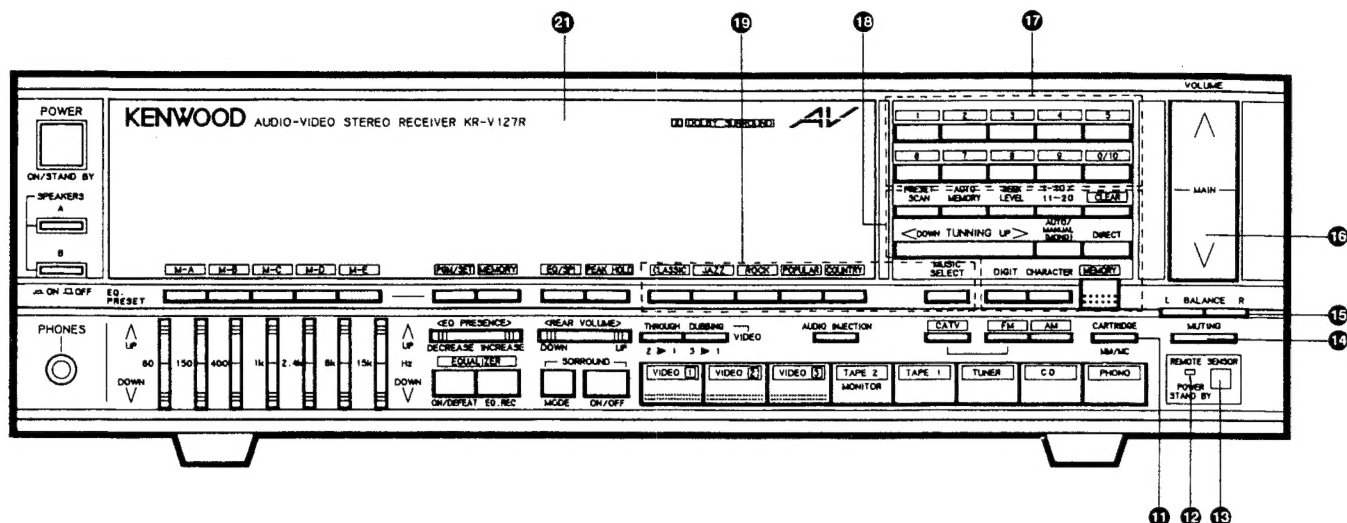
Press this switch to select FM 75 $\Omega$  or CATV 75 $\Omega$  antenna line.

#### ● Band selector switches

**FM** – For FM broadcasts.

**AM** – For AM broadcasts.

## CONTROLS AND INDICATORS



### 11 CARTRIDGE selector switch (KR-V127R)

This switch is used to select the type of cartridge of the turntable connected.

**MM** – When using an MM (moving magnet) and an high output MC (moving coil) cartridge, set the switch to this position.

**MC** – When using an MC cartridge set the switch to this position.

### 12 REMOTE POWER STAND BY indicator

This indicator lights so far as the power cord is plugged into the AC outlet. It is lit to show that the POWER switch on the front panel or the POWER key on the remote control unit can be activated.

### 13 REMOTE SENSOR

Point the supplied remote control unit towards this sensor and operate. It blinks when the signal from the remote control unit is received.

### 14 MUTING key

When the muting key is pressed, the MUTING indicator in the display window will flash, and the overall listening sound level is reduced.

When the key is pressed again, you can restore exactly the same listening level as before.

### 15 BALANCE controls

Governs the amount of sound coming from each paired speakers to get optimum stereo effect. Pressing the RIGHT key will decrease the left channel volume and pressing the LEFT key will decrease the right channel volume. When the BALANCE controls is pressed, display window shows the BALANCE indicator.

The balance of the rear speakers are controlled at the same time.

### 16 VOLUME control key

This control adjusts the left- and right-channel volumes simultaneously. Set it for the desired listening level. Pressing the up (Λ) side increases the volume and pressing the down (V) side decreases it.

The volume level of the rear speakers are controlled at the same time.

#### Note:

A slight noise is heard from the speakers when operating the VOLUME controls. This noise is the built-in microprocessor control signal and is not a fault.

### 17 Numeric keys (1 ~ 0/10)

Use these keys to:

- 1) input directly the digits of frequencies, or
- 2) store and recall frequencies in the preset memory.

### 18 Tuning function keys

#### ● TUNING key

Used to change the frequency. Pressing the UP (>) side will advance to the higher frequency and pressing the DOWN (<) side to the lower frequency.

In the station name input mode, this key is used to select the character.

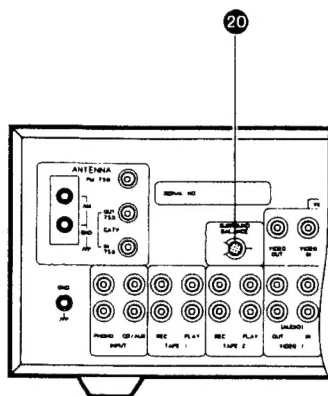
#### ● AUTO/MANUAL (MONO) key

When this key is pressed, the AUTO indicator will light. The frequency will automatically stop at a station in automatic tuning mode. When a stereo broadcast is received, the output sound is automatically changed to stereo.

#### ● DIRECT key

Used to tune to the station directly. Input the desired frequency numerics with the numeric keys after pressing the DIRECT key.

## CONTROLS AND INDICATORS



Rear panel

### ● CLEAR key

Used to clear the contents stored in the preset channel memory. After recalling the preset channel to be cleared, pressing this key will clear the memorized contents.

### ● Preset function (1-10/11-20) key

Used to select 1-10 or 11-20 setting for the preset channel key. In either FM or AM mode, 20 stations can be preset as random as each setting ("1-10" or "11-20") can contain 10 preset stations. Indicator "1-10" lights when "1-10" setting is used, and indicator "11-20" lights when "11-20" setting is used.

### ● SEEK LEVEL select key (During FM reception only)

Used to select the stop level. When "L" is selected, the Auto Stop and Auto Memory functions are possible even for the weak-signal stations. When "H" is selected, the Auto Stop/Auto Memory functions are performed only for the stations having strong signal. Pressing this key alternates between "L" and "H".

### ● AUTO MEMORY key

When this key is pressed ON, the station frequencies will be scanned and stored into the Preset Channels automatically. Scanning operation is performed from the displayed frequency to the higher range and finished after one cycle is over with the receiving band. During Auto Memory operation, the Memory indicator blinks. To release it, press the AUTO MEMORY key again.

### ● PRESET SCAN key

Use this key for preset channel scanning. When a frequency stored in the preset memory is being received, pressing this key shifts the reception to the next frequency stored in the preset memory. (The preset channels are scanned in the order 1, 2,..... 11, 12,..... 20.) To stop a scanning operation, press the SCAN key again. In MUSIC SELECT mode, a preset scanning operation is performed within the music genre selected.

### ● DIGIT select key

In the station name input mode, pressing this key advances the column after selecting the character with the Tuning UP/DOWN key. When this operation is repeated four time, the station name input mode will be released automatically.

### ● CHARACTER mode key

Press this key to activate the station name input mode.

### ● MEMORY key

When the input mode is tuner mode, use this key to store new broadcast station data in the preset channel memory. By pressing the MEMORY key, setting the preset function key to 1-10 or 11-20 and by pressing one of the PRESET 10 key, the frequency being received is stored in the memory in the preset 10 key pressed.

### 19 Music selectors

#### ● MUSIC SELECT key

Pressing this key alternates display of the PRESET INDICATOR between the Music Select mode and the Preset indicator mode.

#### ● MUSIC genre key

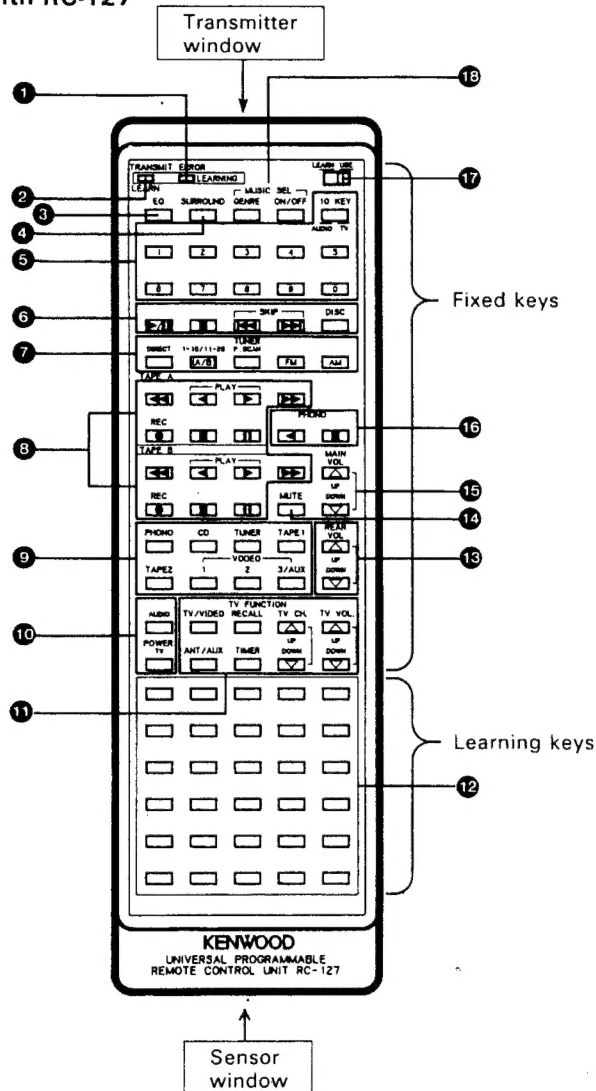
In the Preset indicator mode, a desired music genre can be stored into each Preset Channel memory button. In the Music select mode, this key is also used to select the music genre.

### 20 SURROUND BALANCE knob (on the rear panel)

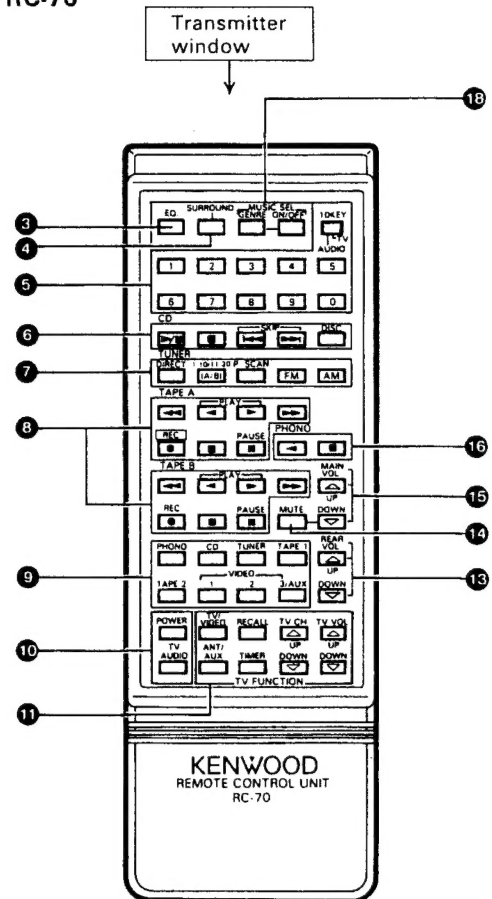
Since the SURROUND BALANCE knob located on the rear panel is set to its center position normally. It is not necessary to adjust it again. However, if the left/right balance is shifted incorrectly, first set the SURROUND mode to the DOLBY position and reproduce the monaural source to adjust so that no sound is heard from the rear speakers.

## CONTROLS, CONNECTORS AND INDICATORS

With RC-127



With RC-70



**Note:**

The description on ①, ②, ⑫, ⑰ and remote control sensor does not apply to the RC-70 unit.

**① ERROR Indicator (KR-V127R)**

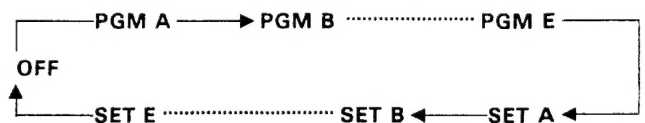
When storing a remote control function, this LED blinks if a learning key with which no remote control function has been stored is pressed. It lights steadily when the remote control function is being stored in memory, and goes out when the storage has been completed.

**② TRANSMIT/LEARN indicator (KR-V127R)**

This LED lights during the transmission of a remote control signal by pressing a fixed key or one of the learning keys with which a remote control function has been stored.

**③ Equalizer preset key (EQ)**

The 5 "PGM" presets and the 5 "SET" presets – total of 10 equalizer preset patterns can be recalled sequentially.



## CONTROLS, CONNECTORS AND INDICATORS

### 4 SURROUND keys

This key is used to turn the surround system ON, and to select the any desired surround mode from the 3 available modes.



### 5 10-KEY mode switch

**AUDIO:** 10-key direct operation is possible only for tuner and CD player.

(For example: when "7" is pressed while listening to track No.4 of the CD player, the track No. is changed to 7.)

**TV:** 10-key direct operation is possible only for TV. Use keys "0-9" in combination for direct channel selection regardless of any previous memory settings or functions. Generally, key in channel numbers in two digits for speedy operation. To key in lower channel numbers from 2~9, key in "0", then the channel number. (For example, to tune in channel 9 directly, key in "0", then "9", for channel 23, key in "2", then "3", etc.)

### 6 Compact disc player (DP-87/DP-57/DP-47/DP-M107R/DP-M97R/DP-M97) operation keys (CD)

#### Play/pause key (▶/II)

When this key is pressed with a compact disc loaded in the compact disc player, the disc is played. (Same function as the play key on the compact disc player.) When this key is pressed during play, the player enters the pause mode. To release pause mode, press it again.

#### Stop key (■)

Press to cancel all operations. The pickup returns to the beginning of the first tune and the player enters the standby mode. (Same function as the stop key on the compact disc player.)

#### Music skip key (▶▶I)

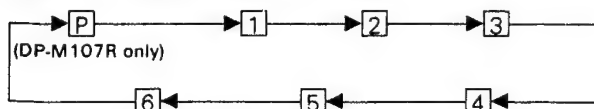
Press to skip to the beginning of the next tune. The pickup is advanced to the forward tunes by the number of times it is pressed. (Same function as the music skip key on the compact disc player.)

#### Music skip key (I◀◀)

Press to return to the beginning of the current tune. Pressing it again returns the pickup to the beginning. When the key is continuously pressed, the pickup returns to the backward tunes by the number of times it is pressed. (Same function as the music skip key on the compact disc player.)

#### Disc select key (DISK)

When a multiple CD player (DP-M107R, DP-M97R, DP-M97) is connected, this key selects one of six (or seven) CDs sequentially in a cycle.



### 7 Tuner operation keys (TUNER)

#### DIRECT

When this key is pressed, the unit is set to direct mode and the frequency of the desired station can directly be input using 10-key.

#### 1-10/11-20 (A/B)

Each time this button is pressed, the preset station range is changed.

#### P. SCAN

When this key is pressed, the preset stations are automatically received from 1 for a specified time.

#### Band select keys (FM/AM)

Select the desired band of broadcast listening.

### 8 Cassette deck operation keys (KX-97CW, KX-77CW, KX-67W ..... TAPE A/B) (KX-87CR ..... TAPE B only)

#### Stop key (■)

Press to stop tape running.

#### Rewind key (◀◀)

Press to fast-wind the tape to the left reel.

#### Fast-forward key (▶▶)

Press to fast-wind the tape to the right reel.

#### Reverse play key (◀)

Press to start playback in reverse direction. (Rear side playback).

When use the KX-77CW, the Reverse Play Key (◀) of the TAPE-A dose not function. When use the KX-67W, the Reverse Play Key (◀) of the TAPE-A and TAPE-B dose not function.

#### Play key (▶)

Press to start playback in forward direction. (Front side playback).

#### Pause key (II)

Press to stop play back or recording momentarily. The function of the PAUSE key.

#### Record key (REC) (●)

Press to start recording.



## CONTROLS, CONNECTORS AND INDICATORS

### 9 Input selector keys

**PHONO:** To listen to a source from the turntable connected to the PHONO jacks.

**CD:** To listen to a source from the CD player connected to the CD jacks, press this switch.

**TUNER:** To listen to FM, AM or CATV broadcasting.

**TAPE-1:** To listen to a source from the tape deck connected to the TAPE 1 jacks.

**TAPE-2:** To listen to a source of the tape deck, etc., connected to the TAPE 2 jacks.

**VIDEO 1:** To listen to a source from the equipment connected to the VIDEO 1 jacks.

**VIDEO 2:** To listen to a source from video cassette recorder connected to the VIDEO 2 jacks.

**VIDEO 3/AUX:** To listen to a source from video cassette connected to the VIDEO 3 jacks.

### 10 POWER switch

**AUDIO:** Press to turn the stereo system ON. Press again to turn the stereo system OFF.

**TV (KMT-1026, KMT-2026S):** Press to turn the TV ON. Press again to turn the TV off.

### 11 TV (KMT-1026, KMT-2026S) operation keys (TV FUNCTION)

**Note:** With the supplied remote control unit, only KMT-1026, KMT-2026S (monitor TV) can be operated.

#### TV/VIDEO key

Use this key to select the type of signal that the monitor will receive: TV, VIDEO 1 or VIDEO 2.

#### RECALL key

Press the recall key and both the time and channel will be displayed continuously. Press it again and they will disappear. The timer function can be utilized as well but the time will not continuously be displayed.

#### Channel tuning UP/DOWN keys (TV CH.) (Δ/▽)

Press to channel UP (Δ) key to tune in higher channels, and the channel DOWN (▽) key to tune in lower channels. Press the key continuously until the channel number you wish to receive appears on the upper right side of the screen.

#### ANT/AUX key

Press this key to set the ANT and AUX indicator to agree with the antenna input source.



#### TIMER key

Press the timer key to set desired time.

#### TV VOL. key (Δ/▽)

Apply steady pressure to the VOLUME UP (Δ) or DOWN (▽) keys, to increase or decrease the volume as desired.

### 12 Learning keys (30 keys) (KR-V127R)

Up to 30 remote control functions for other AV components can be stored with these keys.

### 13 Rear volume controls (REAR VOL.)

Adjust front/rear balancing when surround speakers are used. The control range is  $\pm 20$  dB of the front speaker level.

### 14 Muting key (MUTE)

Press to decrease the volume level instantaneously. Pressing it again resumes the previous volume level. When this key is pressed, volume level is decreased. The MUTING indicator blinks.

### 15 Volume control keys (MAIN VOL. UP Δ/DOWN ▽)

Controls the volume of the speakers and headphones. Press the UP (Δ) key to increase the volume level, and press the DOWN (▽) key to decrease it.

#### Note:

The volume is raised up to the level preset at the control amplifier.

### 16 Turntable (KD-77F, KD-67F, KD-47F) operation keys (PHONO)

#### Play key (◀)

Press to start record play automatically.

For KD-67F, select the record size when turning the power on.

#### Stop key (■)

Press to stop play; the tonearm returns to the rest and the platter stops rotating.

### 17 LEARN↔USE switch (KR-V127R)

**USE:** Set to this position for normal remote control operations (using the fixed keys or the learning keys).

**LEARN:** Set to this position to store remote control functions under the learning keys. Otherwise set this switch to USE.

### 18 Music select keys (MUSIC SEL.)

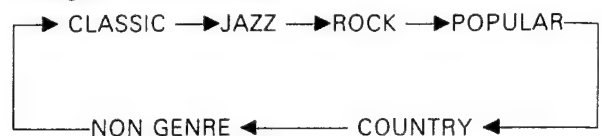
#### ON/OFF Key

The same function as the MUSIC SELECT Key 19 on the main unit front panel.

#### Music GENRE key

In the MUSIC SEL. mode, a specific music genre can be selected to tune in stations of that genre.

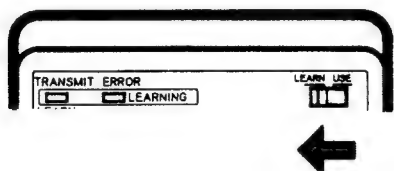
Each time the GENRE key is pressed, the music genre changes in cyclical order.



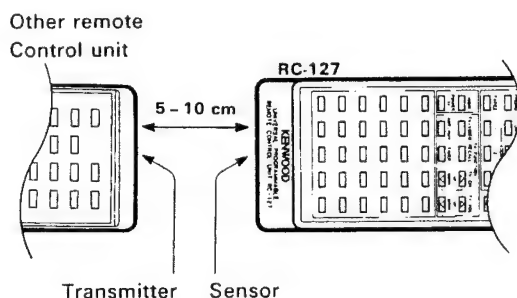
## HOW TO USE THE LEARNING FUNCTION

■ To program ("learn") remote-control function of another remote-controllable equipment to the supplied RC-127

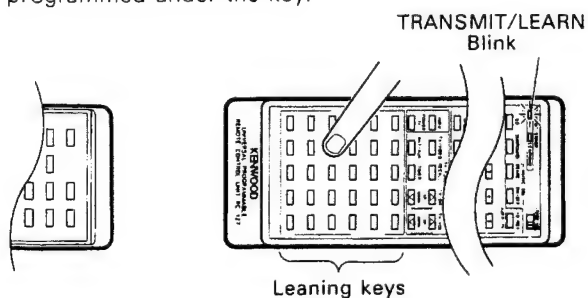
1. Set the LEARN ↔ USE switch to LEARN.



2. Place the two remote control units so that the sensor of this unit (on the side with KENWOOD mark) and the transmitter of the other remote control unit face each other at a distance of 5 - 10 cm or 2 - 4 inches, as shown in the illustration.
- Do not place the remote control units in contact between them, otherwise malfunction may occur.

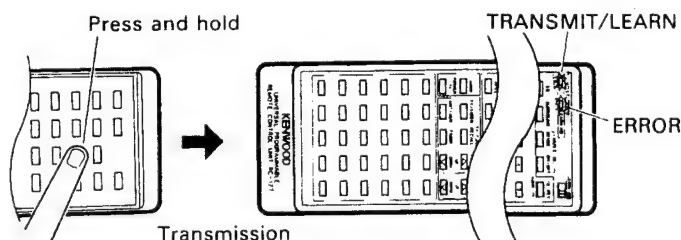


3. Press one of the Learning keys of this unit, under which you want to program the remote-control function.
- The TRANSMIT/LEARN indicator will blink.
- If the ERROR indicator lights and the TRANSMIT/LEARN indicator blinks at the same time, it indicates that a remote-control function has already been programmed under the key.



4. Within approx. 7 seconds after pressing the key (while the TRANSMIT/LEARN indicator is blinking), depress and hold the key of the other remote control unit of the function to be programmed.
- The TRANSMIT/LEARN indicator blinking turns to steady lighting, and the ERROR indicator lights.
- The two indicators go off momentarily in a few seconds, the TRANSMIT/LEARN indicator alone turns on again, and go off. Hold the key all through this.

Example: REPEAT key

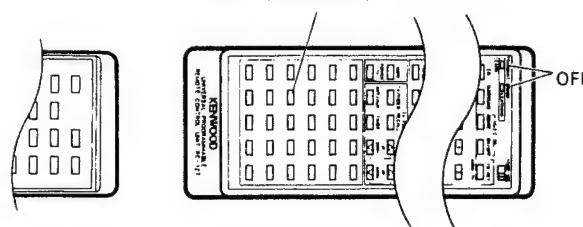


Indicator status

TRANSMIT	Blink → ON → OFF → ON → OFF
ERROR	ON → OFF

5. When the TRANSMIT/LEARN indicator has completely gone off, release the key of the other remote control unit.

Now, REPEAT has been programmed under ("learned by") this key.



6. To program another function under another key, repeat operations from step 3 to 6.

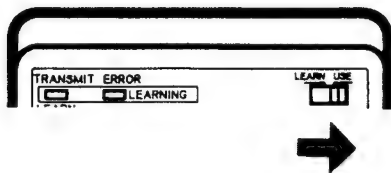
■ To change the content that has been programmed ("learned") before

Press the Learning key under which a function has been programmed, and repeat the same operations as steps 3 to 6 in the programming procedure above.

## HOW TO USE THE LEARNING FUNCTION

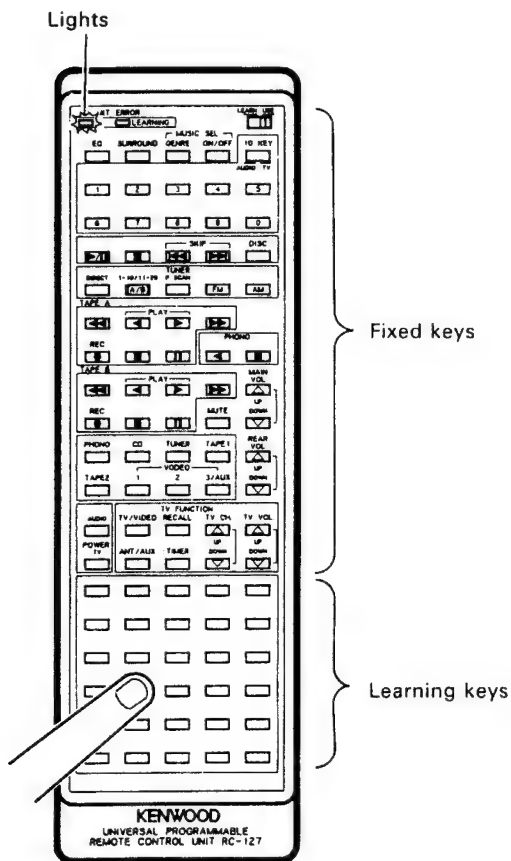
### ■ To remote-control equipment using the Learning key of RC-127

1. Set the LEARN ↔ USE switch to USE.



2. Press one of the Learning keys under which a function has been programmed.

- In the same way as with a fixed key, the TRANSMIT/LEARN indicator lights and remote control is executed.
- If the Learning key does not operate, program the function again.



### ■ How to use the supplied sticker label

This unit comes with function indicator labels and blank labels.

When you have programmed a function under a Learning key and if there is a label indicating the function, peel the label off from the mount and attach to the unit.

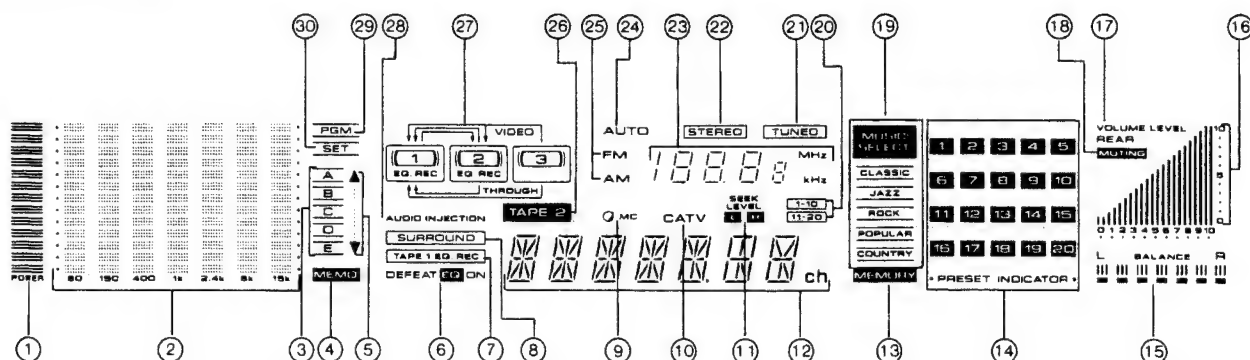
If there is no label indicating the function you have programmed, write it down on a blank label using a oil-ink felt pen or pencil, and attach to the unit.

### Notes:

1. In the middle of the programming procedure, the blinking TRANSMIT/LEARN indicator may go off if you leave the unit for more than 7 seconds after pressing the desired Learning key. From this condition, the programming cannot be continued; press the Learning key again, and program a function while the indicator is blinking.
2. If, in the programming procedure, the TRANSMIT/LEARN and ERROR indicators go off momentarily then only the ERROR indicator lights (for approx. 2 seconds), programming is not possible; re-start programming from the beginning. Remote-control codes using special signal modulation patterns may not be programmable.
3. If you commit an operation mistake as listed below, the ERROR indicator alone lights to indicate the error.
  - When a fixed key is pressed with the LEARN ↔ USE switch set to LEARN.
  - When a Learning key under which no function has been programmed is pressed with the LEARN ↔ USE switch set to USE.
  - When more than one key is pressed simultaneously.
4. Exchange batteries within 3 minutes to avoid program loss.

## INDICATORS

### Display window



- ① Display the power level display.
- ② In graphic equalizer mode, displays the equalizer level display, the music spectrum analyzer display and peak hold display.
- ③ Displays when storing or recalling equalizer preset channel in memory.
- ④ This indicator lights when the Memory (EQ) key is pressed to store the desired equalizer curve.
- ⑤ Equalizer Presence Indicator.
- ⑥ Lights when the EQUALIZER switch is set to "ON".  
Lights when the EQUALIZER switch is set to "DEFEAT".
- ⑦ This indicator lights when EQ REC (equalizer recording) is engaged for Tape 1.
- ⑧ Lights when the SURROUND ON/OFF switch is pressed.
- ⑨ Lights when the MC cartridge is selected. (KR-V127R)
- ⑩ Lights when the CATV switch is pressed. (KR-V127R)
- ⑪ This displays the "L" or "H" seek level in FM mode.
- ⑫ This displays the input mode, preset channel, station name, front volume level, rear level balance, surround mode, EQ preset channel and music genre.
- ⑬ Lights when the MEMORY key is pressed.  
Blinks when the AUTO MEMORY key is pressed.
- ⑭ Displays preset music genre selected at music select mode, and all of the preset broadcast station channels which are in the Preset indicator at preset indicator mode.
- ⑮ Indicates the left and right volume balance.
- ⑯ Displays the volume level, also displays rear volume level during flashing the REAR indicator.
- ⑰ Flashes when the REAR LEVEL controls is pressed.
- ⑱ Flashes when the MUTE key is pressed.
- ⑲ When the Music Select key and MUSIC GENRE key are pressed, the "MUSIC SELECT" and one of the music genre indicators light.
- ⑳ "1-10" or "11-20" lights according to the selection of the preset function keys.
- ㉑ In tuner mode, lights when a station is tuned in.
- ㉒ In tuner mode, lights when a stereo broadcast is tuned in.
- ㉓ Displays the digital frequency display.
- ㉔ Lights during auto tuning.
- ㉕ Displays the tuner band "FM" or "AM".
- ㉖ Lights when the TAPE-2 key is pressed.
- ㉗ Display the VIDEO dubbing mode, VIDEO monitor out mode, EQ REC mode or through dubbing mode displays.
- ㉘ Lights when the AUDIO INJECTION is pressed.
- ㉙ Lights when the PGM/SET key is set to "PGM".
- ㉚ Lights when the PGM/SET key is set to "SET".

## CIRCUIT DESCRIPTION

### Description of components

**TUNER UNIT (X05-352X-XX) 0-10 : K 1-01 : P 0-81 : U, UE 2-71 : E**

Ref No.	Parts No.	Use/Function	Operation/Condition/Compatibility
IC1	LA1235	FM IF detector	
IC2	LM7001	PLL (Phase Locked Loop)	
IC3	LA1245	AM detector	
IC4	LA3401	FM MPX	
IC7	NJM4558D-A or M5218P	For ALC amplification	Amplifier.
IC8	NJM4558D-A or M5218P	For amplification	Surround matrix.
IC9	MN3101	Clock oscillation	Clock oscillator for BBD IC.
IC10	MN3008	Delay device	BBD IC.
IC11	NJM4558D-A or M5218P	For amplification	Amplifier.
IC12	NE645N	Dolby IC	DOLBY.
IC13	NJM4558D-A or M5218P	For amplification	Amplifier.
IC14	STK4112/2 or STK4121/5	For power amplification	Power amplifier.
Q1	2SC1923(R,O)	IF amplifier	
Q2, 3	2SC1845(F,E)	PLL, Low-pass filter	
Q4	2SC2003(L,K)	5V constant voltage, for PLL	
Q5	DTA124ES	FM + B select	Turns ON in FM mode.
Q6	DTA124ES	AM + B select	Turns ON in AM mode.
Q7	DTC114ES	FM + B select	Turns ON in FM mode.
Q8	DTC114ES	TUNED indicator, for SD	Turns OFF when tuned.
Q9	DTC114ES	Forced mono select	Turns OFF in forced mono mode.
Q10	2SC1740S(Q,R) or 2SC945(A)(Q,P)	TUNED indicator, for SD	Turns ON when tuned.
Q11	2SC1740S(Q,R) or 2SC945(A)(Q,P)	Forced mono select	Turns ON in forced mono mode.
Q12	DTC114ES	CATV relay drive	Turns ON in CATV mode.
Q13	DTA124ES	CATV relay drive	Turns ON in CATV mode.
Q14, 15	DTC114ES	Seek level select	Q15 is ON and Q14 is OFF when low.
Q16	2SC1740S(Q,R) or 2SC945(A)(Q,P)	Buffer for L5	
Q17	2SC2003(L,K)	+B ripple filter	
Q24	2SA992(F,E)	Microprocessor ( $\mu$ -COM) power supply, for fast OFF	
Q25	2SA733(A)(Q,P) or 2SA933S(Q,R)	Relay driver for surround	
Q26	2SC1740S(Q,R) or 2SC945(A)(Q,P)	Relay driver for surround	
Q27	2SC2003(L,K)	Relay driver for surround	

**POWER AMPLIFIER UNIT (X07-235X-XX) 0-10 : K, P, U, UE 2-73 : E**

Ref. No.	Parts No.	Use/Function	Operation/Condition/Compatibility
IC1	$\mu$ PC1237HA	Protection	Relay drive.
Q1 ~ 4	2SC1845(F,E)	Primary stage voltage amplification	
Q5 ~ 8	2SC945(A)(Q,P)	Primary stage cascode amplifier	
Q9 ~ 12	2SC1845(F,E)	Secondary stage voltage amplification	
Q13 ~ 16	2SA1123(R,S)	Third stage voltage amplification	
Q17, 18	2SA1123(R,S)	Third stage cascode amplifier	
Q19, 20	2SC2631(R,S)	Third stage current mirror	
Q21, 22	2SC3944(Q,R)	Power amplifier driver	
Q23, 24	2SA1535(Q,R)	Power amplifier driver	
Q25, 26	2SC2631(R,S)	Protection, current detection	Positive (+) side.
Q27, 28	2SA992(F,E)	Protection, current detection	Negative (−) side.
Q29	2SA992(F,E)	Protection	Transmits the current detected signal to IC1.

## CIRCUIT DESCRIPTION

## AUDIO UNIT (X09-247X-XX) 0-13 : K, P, U, UE 2-72 : E

Ref. No.	Parts No.	Use/Function	Operation/Condition/Compatibility
IC1	NJM4558D-A or M5218P-A	Phono equalizer	
IC2	TC9164N	Input selector select	
IC3	TC9163N	Input selector select	
IC4	TC9162N	GE, GE REC ON/OFF, surround mode select	
IC5	NJM4558D-A or M5218P-A	Buffer for REC	
IC6	LC7522	VR array for GE (Graphic Equalizer)	
IC7, 8	M5229P	Op amplifier for GE	Semiconductor L (self-reactance) x 7.
IC9	NJM4558D-A or M5218P-A	OP amplifier for surround	Stadium surround.
IC10, 11	CXD1120P-1	Electronic volume	IC10 for front channel, IC11 for rear channel.
IC12	μPC78M15H	3-pin regulator	15V.
Q1, 2, 7, 8	2SC2878	MM/MC select	Q1 and Q2 : Input impedance select, Q7 and Q8 : Gain select.
Q3 ~ 6	2SK163(L,M)	PHONO input stage	Differential input section.
Q9, 10	2SC2878	Muting	Muting when changing the selector.
Q11	2SA733(A)(Q,P)		Q9 and Q10 are driven by open collector.
Q13, 14	2SC945(A)(Q,P)	L and R mixer for spectrum analyzer	Emitter follower.
Q15, 16	2SC1845(F,E)	Stadium surround	Input buffer amplifier.
Q17, 18	2SC2878	Muting	Muting for MAIN IN section.
Q19	2SC945(A)(Q,P)	Drive circuit for muting	
Q20	2SA733(A)(Q,P)	Drive circuit for muting	
Q21, 22	2SC1845(F,E)	Buffer for rear-channel amplifier	
Q23, 24	2SC2878	Muting	Muting for rear-channel amplifier.
Q25, 26	2SB941(Q,P)	Constant voltage for -33V	
Q27	2SD1929	For FL ON (go on) timing	Switch for -33V, high-β (beta) transistor.
Q28	2SA733(A)(Q,P)		
Q29	2SA992(F,E)	For FL OFF (go out) on power OFF	
Q30	2SD1266(Q,P)	For -14V constant voltage	Inverted-darlington connection with Q32.
Q31	2SA733(A)(Q,P)	-14V constant voltage	Error amplification.
Q32	2SA733(A)(Q,P)	-14V constant voltage	
Q33	2SD1266(Q,P)	5V constant voltage	5V power supply for display.
Q34	2SD1266(Q,P)	5V constant voltage	5V power supply for microprocessor.
Q35	2SA992(F,E)	Relay drive for surround	
Q36	2SC2003(L,K)	Relay drive for surround	
Q37, 38	2SC3419(Y)	For main amplifier bias	
Q39, 40	2SC2922*5	Main amplifier final stage	
Q41, 42	2SA1216*5	Main amplifier final stage	

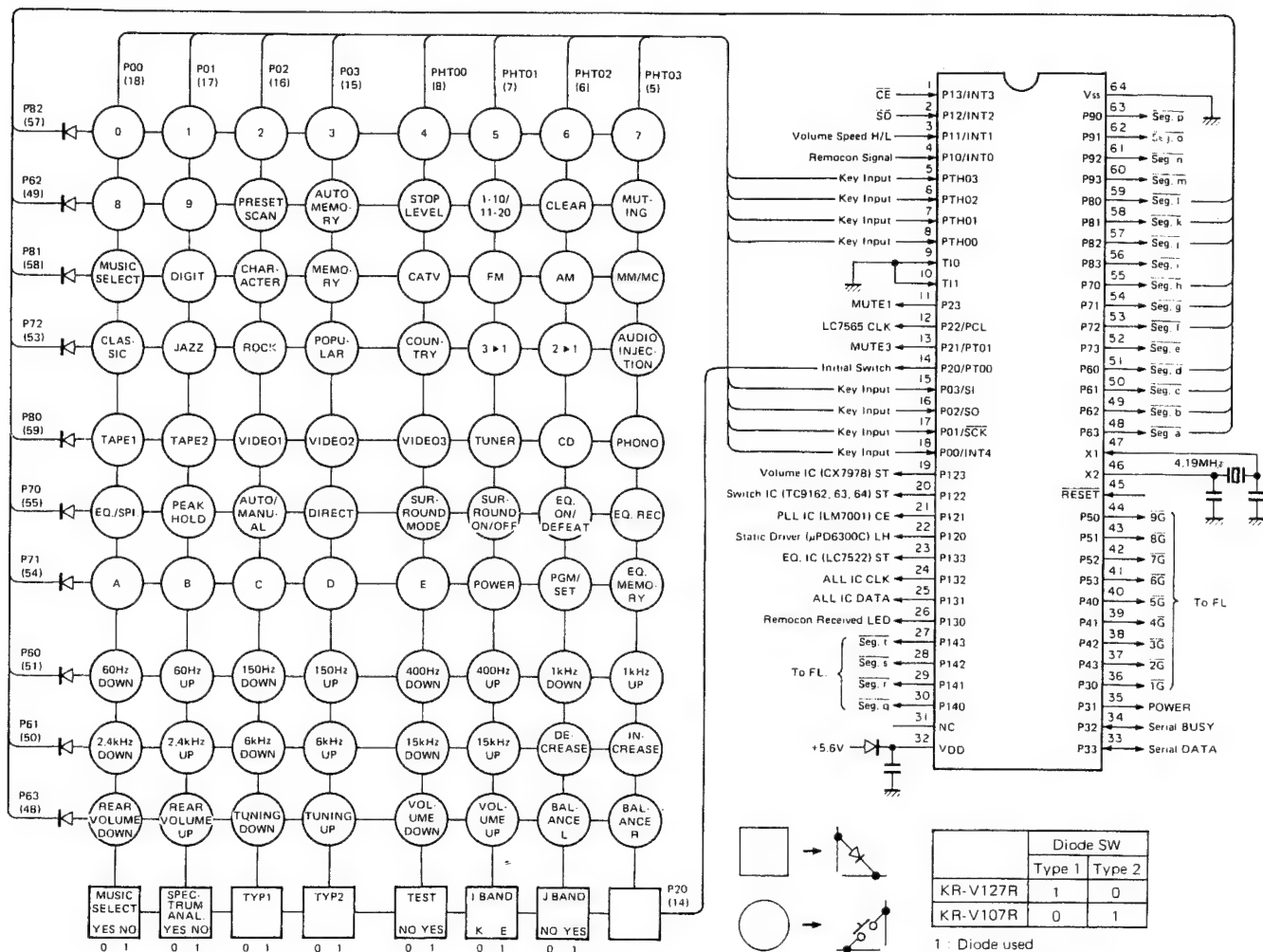
## DISPLAY UNIT (X14-213X-XX) 0-10 : K, P 0-81 : U, UE 2-72 : E

Ref. No.	Parts No.	Use/Function	Operation/Condition/Compatibility
IC1	μPD75108CW-041	Microprocessor	
IC2 ~ 5	μPA80C	Transistor array (for FL drive)	Active low.
IC6	μPD6300C	Static driver (for FL drive)	
IC7	LC7565	GE, SP display IC	
IC8, 9	LB1294	Transistor array (for FL drive)	Active high.
IC10, 11	μPD4001BC	Logic IC	Data mute circuit.
IC12, 13	μPD4066BC	Analog switch IC	Video select.
IC14 ~ 17(2/2)	AN6556	Spectrum analyzer band-pass filter	
IC17(1/2)	AN6556	Spectrum analyzer band-pass filter	Input amplifier.
Q1 ~ 4	DTA143EFF	Digital transistor (for FL drive)	
Q7	2SC945(A)(Q,P)	For through-dubbing control	Turns OFF when a through-dubbing operation is activated in VIDEO 2 and VIDEO 3 mode.
Q8 ~ 10	2SA999(E,F)	Video output buffer	
Q11	2SC1845(F,E)	Data mute circuit	
Q12	2SC945(A)(Q,P)	Realy drive	
Q13	2SC2003(L,K) or 2SD1266	Realy drive	
Q14	2SC945(A)(Q,P)	Microprocessor reset circuit	Turns ON for several milli-seconds, when power is turned ON.

## CIRCUIT DESCRIPTION

Microprocessor :  $\mu$ PD75108CW-041 (X14-2130-10 : IC1)

## Terminal connection



## • Volume IC CX7978

CLK (9), DATA (10), ST (11)

	CS1 (4)	CS2 (5)	M/S (6)
FRONT	V <sub>SS</sub>	V <sub>SS</sub>	OPEN or V <sub>DL</sub>
REAR	OPEN or V <sub>DL</sub>	OPEN or V <sub>DL</sub>	OPEN or V <sub>DL</sub>

The ST signal to the IC is input by differentiating the signal from the microcomputer.

## • PLL IC LM7001

CLK (2), DATA (4), ST (3)

	AO	BO
FM	1	0
AM	0	1
Except TUNER	0	0

## • Switch IC

CLK (15), DATA (16), ST (13)

	S1	S2	S3	S4	S5	S6	S7	S8
TC9162N	EQ REC	EQ REC	EQ ON	EQ ON	DOLBY	THEATER	STADIUM	-
TC9163N	VIDEO 2 2 → 1 (V1 REC)	VIDEO 3 3 → 1 (V1 REC)	AUDIO INJECTION 1 (V1 REC)	VIDEO 1	VIDEO 2	VIDEO 3	VIDEO 1 (V2 REC)	VIDEO 3 (V2 REC)
TC9164N	TAPE 1	CD/AUX	PHONO	TUNER	TAPE 2 PLAY	TAPE 2 PLAY	AUDIO INJECTION 2 (V2 REC)	TAPE 1

The ST signal to the IC is input differentiating the signal from the microcomputer.

• Static Driver IC  $\mu$ PD6300C

CLK (12), DATA (11), LH (10)

Output	O0 (15)	O1 (16)	O2 (17)	O3 (18)	O4 (19)	O5 (20)	O6 (21)	O7 (22)	O8 (23)	O9 (24)
Display			FM	AM	AUTO	CATV	SEEK LEVEL		1 EQ REC	
Terminal	PD7	PD3	PD6	PD5	PD4	PD2	PD1	PC11	PC9	PC6
Output	O10 (25)	O11 (26)	O12 (27)	O13 (1)	O14 (2)	O15 (3)	O16 (4)	O17 (5)	O18 (6)	O19 (7)
Display	AUDIO INJECTION	TAPE 1 EQ REC			EQ ON	SURROUND	TAPE 2			
Terminal	PC4	PC2	PB2	PB1	PC1	PC3	PC5	PC7	PC10	PC12

• Equalizer IC LC7522 S (13) : VEE, CLK (17), DATA (16)

• EQ./SPI display IC LC7565 S1 (15), S2 (16) : VDD, CLK (18), DATA (17)



## CIRCUIT DESCRIPTION

### Terminal functions

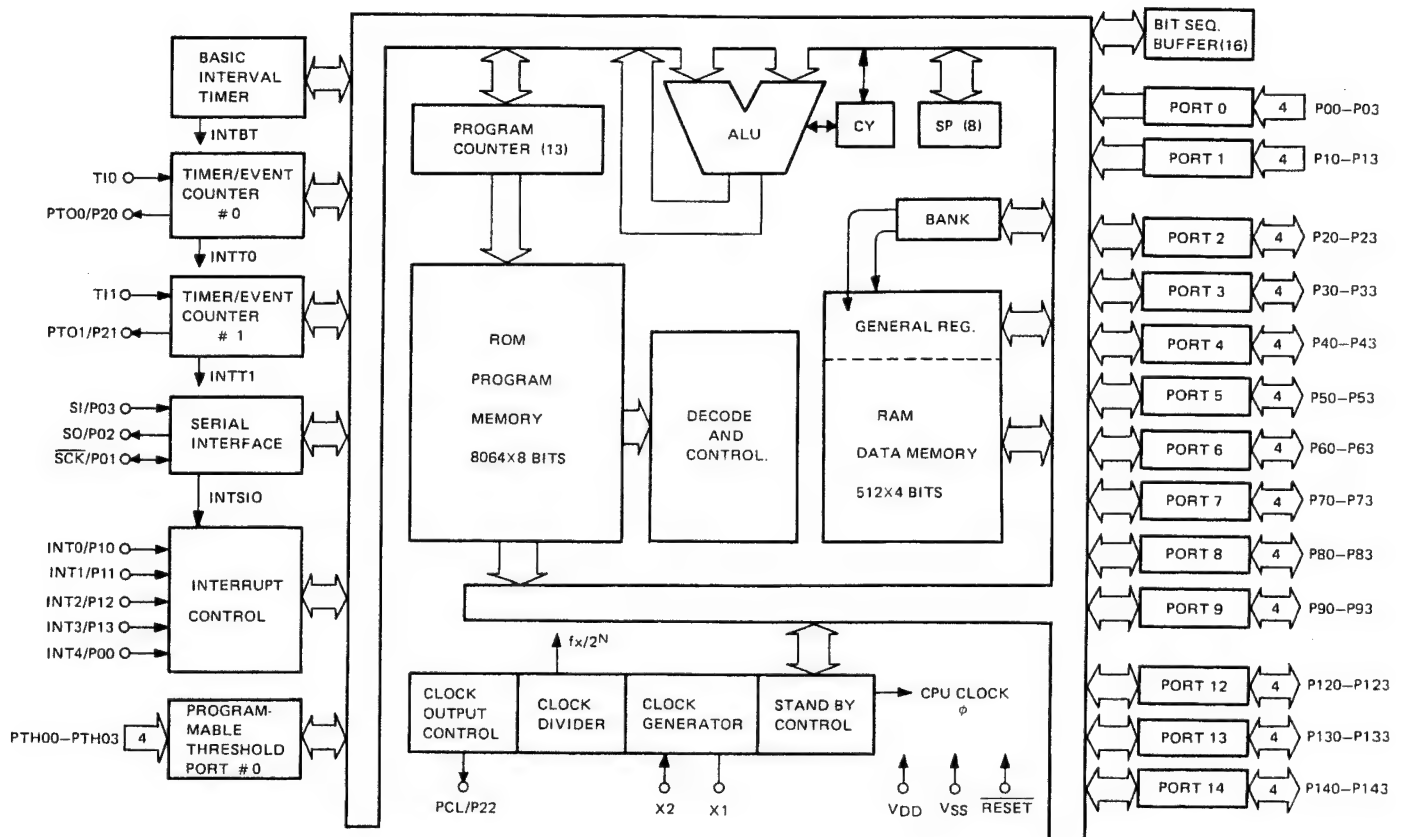
Pin No.	Pin name	I/O	Name	Description
1	P13/INT3	I	$\overline{\text{CE}}$	Backup detection pin. When this goes low level, backup mode is set and the clock stops.
2	P12/INT2	I	$\overline{\text{SD}}$	Station presence/absence detection signal input pin: Used in Auto Tuning, Auto Memory, and Preset Scan. High : station is not present, Low : Station is present.
3	P11/INT1	I	Volume Speed	Volume data output inhibition time setting port : Used when electronic volume CX7978 malfunctions at low temperature. High : 400ms, Low : 96ms. * This is used when low in the KR-V126R.
4	P10/INT0	I	Remocon Signal	Remote control signal input pin after detection : Inputs the remote control signal level in normal mode and when reading out the leader code. Detects the signal by interruption the rising edge when reading the data.
5~8	PTH03~PTH00	I	Key Input	Key matrix return signal input pin : Normally high. (Threshold voltage = $V_{DD} \times 7.5/16$ , Conversion time : 32.3 $\mu$ s).
9 10	T10 T11	I	Not used	No-connection input pin. Fixed at VDD or Vss.
11	P23	O	MUTE1	Muting signal output pin : Used when the Input Selector is changed, during tuning scan, etc. Normally low, Active high.
12	P22/PCL	O	LC7565 CLK	Output pin to be connected to the CLK pin of LC7565. Normally low.
13	P21/PTO1	O	MUTE3	<ul style="list-style-type: none"> <li>With the volume level of the front channel set to between 0 and -28dB, outputs the muting signal for a short period (about 10msec.) when the TAPE2 ON/OFF, EQ ON/OFF, EQ REC ON/OFF, surround ON/OFF or surround mode selector is switched.</li> <li>When the volume level of the front channel is set to <math>-\infty</math> dB, outputs the muting signal.</li> </ul>
14	P20/PTO0	O	Initial SW	Strobe signal for taking in the initial switch. Momentarily low immediately after reset, otherwise always high.
15~18	P03/S1~P00/INT4	I	Key Input	Key matrix returns signal input pin : Normally high.
19	P123	O	Volume IC (CX7978)ST	<ul style="list-style-type: none"> <li>ST signal output pin for the electronic volume IC (CX7978) .</li> <li>Normally high, and low when data is output.</li> <li>The microprocessor signal is input to the ST pin of CX7978 after differentiating.</li> </ul>
20	P122	O	Switch IC (TC9162N, 9163N, 9164N)ST	<ul style="list-style-type: none"> <li>ST signal output pin for the switch ICs (TC9162N, TC9163N, and TC9164N).</li> <li>Normally high, and low when data is output.</li> <li>The microprocessor signal is input to the ST pin after differentiating.</li> </ul>
21	P121	O	PLL IC (LM7001)CE	<ul style="list-style-type: none"> <li>CE signal output pin for the PLL IC (LM7001) .</li> <li>Normally low, and high when data is output.</li> </ul>
22	P120	O	Static Driver ( $\mu$ PD6300C)LH	<ul style="list-style-type: none"> <li>LH signal output pin for the Static Driver IC (<math>\mu</math>PD6300C) .</li> <li>Normally low, and high when data is output.</li> </ul>
23	P133	O	EQ IC (LC7522)ST	<ul style="list-style-type: none"> <li>The signal pin used to mute the CLK and DATA signals to the other ICs, so that the signal is not input to the CLK and DATA pins of LC7522.</li> <li>Normally high, and low when data is output.</li> </ul>
24	P132	O	CLK	CLK signal output pin for CX7978, TC9162N, TC9163N, TC9164N, LM7001, and LC7522.
25	P131	O	DATA	DATA signal output pin for CX7978, TC9162N, TC9163N, TC9164N, LM7001, LC7522, and LC7565.
26	P130	O	Remocon Received LED	Directly drives the remote control STANDBY/RECEIVED LED. It blinks while the remote control signal is being received, and is lit otherwise.

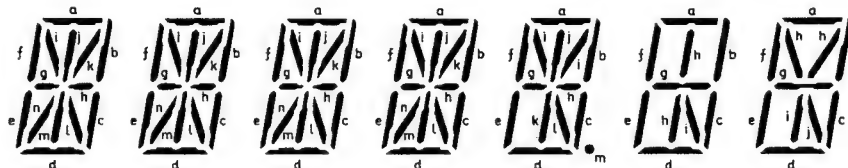
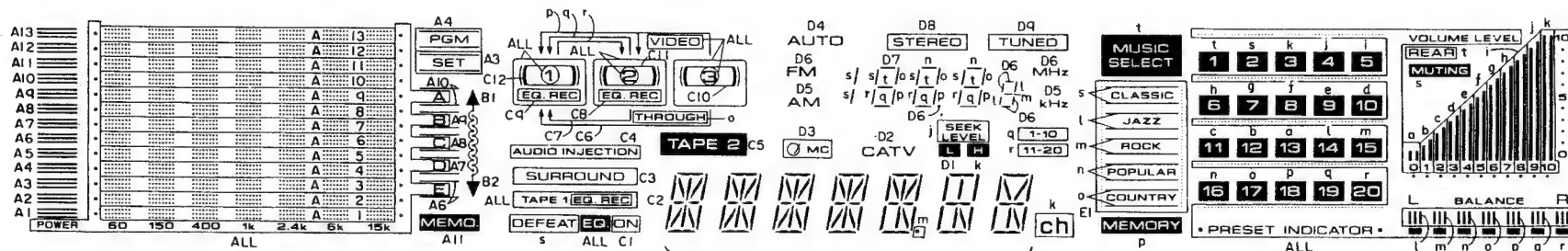
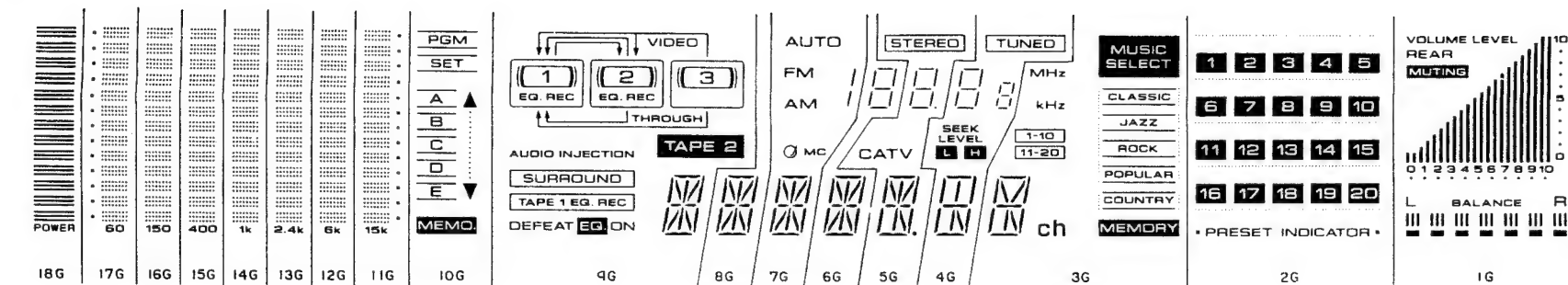
## CIRCUIT DESCRIPTION

Pin No.	Pin name	I/O	Name	Description
27	P143	O	$\overline{\text{Seg t}}$	<ul style="list-style-type: none"> <li>• FL segment control pin.</li> <li>• Negative logic.</li> <li>• Drives the FL display through an inversion buffer.</li> </ul>
28	P142		$\overline{\text{Seg s}}$	
29	P141		$\overline{\text{Seg r}}$	
30	P140		$\overline{\text{Seg q}}$	
31	NC			
32	VDD			Power supply pin.
33	P33	I/O	Serial DATA	<ul style="list-style-type: none"> <li>• DATA pin for system serial communication .</li> <li>• Normally in input mode, and in output mode only when serial data is output.</li> </ul>
34	P32	I/O	Serial BUSY	<ul style="list-style-type: none"> <li>• BUSY pin for system serial communication .</li> <li>• Normally in input mode. Outputs a high level signal when serial data is output. Also provides the serial bus control function.</li> </ul>
35	P31	O	POWER	Output pin for the power relay control : Active high. This is controlled by the POWER key. It alternates between high (Power ON) and low (Power OFF) each time the POWER key is pressed.
36	P30	O	$\overline{1G}$	<ul style="list-style-type: none"> <li>• FL digit control pin.</li> <li>• Negative logic.</li> <li>• Drives the FL display through an inversion buffer.</li> </ul>
37	P43		$\overline{2G}$	
38	P42		$\overline{3G}$	
39	P41		$\overline{4G}$	
40	P40		$\overline{5G}$	
41	P53		$\overline{6G}$	
42	P52		$\overline{7G}$	
43	P51		$\overline{8G}$	
44	P50		$\overline{9G}$	
45	RESET	I		Input pin for the reset signal from the microcomputer .
46	X2			• System clock oscillator pin (4.194MHz) .
47	X1			
48	P63	O	$\overline{\text{Seg a, Key}}$	<ul style="list-style-type: none"> <li>• FL segment control pin .</li> <li>• Negative logic.</li> <li>• Drives the FL display through an inversion buffer.</li> <li>• Key intake strobe signal output pin.</li> </ul>
49	P62		$\overline{\text{Seg b, Key}}$	
50	P61		$\overline{\text{Seg c, Key}}$	
51	P60		$\overline{\text{Seg d, Key}}$	
52	P73		$\overline{\text{Seg e}}$	
53	P72		$\overline{\text{Seg f, Key}}$	
54	P71		$\overline{\text{Seg g, Key}}$	
55	P70		$\overline{\text{Seg h, Key}}$	
56	P83		$\overline{\text{Seg i}}$	
57	P82		$\overline{\text{Seg j, Key}}$	
58	P81		$\overline{\text{Seg k, Key}}$	
59	P80		$\overline{\text{Seg l, Key}}$	
60	P93		$\overline{\text{Seg m}}$	
61	P92		$\overline{\text{Seg n}}$	
62	P91		$\overline{\text{Seg o}}$	
63	P90		$\overline{\text{Seg p}}$	
64	Vss			GND pin.

## CIRCUIT DESCRIPTION

Block diagram





Terminal No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Electrode	F	F	F	P(A1)	P(A2)	18G	P(A3)	P(A5)	17G	P(A6)	P(A7)	16G	P(A8)	P(A9)	15G	P(A10)	14G	P(A11)	P(A12)	13G
Terminal No.	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Electrode	P(A13)	12G	P(ALL)	P(A4)	11G	P(B1)	P(B2)	P(C1)	10G	P(s)	P(C2)	IC	9G	P(C3)	P(C4)	P(C5)	P(C6)	P(C7)	P(C8)	9G
Terminal No.	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Electrode	P(C9)	P(C10)	P(C11)	P(C12)	P(D1)	9G	P(D2)	8G	P(D4)	P(D5)	7G	P(D6)	P(D3)	6G	5G	P(D7)	P(D8)	P(t)	5G	P(D9)
Terminal No.	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
Electrode	4G	P(m)	P(l)	P(r)	4G	P(q)	P(p)	3G	P(o)	P(n)	P(m)	3G	2G	P(l)	P(E1)	P(t)	P(k)	P(j)	2G	P(i)
Terminal No.	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	
Electrode	P(k)	P(h)	P(g)	2G	P(f)	1G	P(g)	P(n)	P(l)	P(m)	P(e)	P(d)	P(c)	1G	P(b)	p(a)	F	F	F	

**Notes** F : Filament P : Anode  
G : Grid IC : Internally Connected Pin

Since the segments "t", "m", "l", "n", "g", and "k" are not connected inside the FL display, they must be connected externally (on the PC Board).

KR-V127R

## CIRCUIT DESCRIPTION

Indicator tube : FIP20AMW30 (X14-2130-10 : FL1)

## CIRCUIT DESCRIPTION

### Test mode

#### (1) Setup and release of test mode

Setup : Apply test mode diode and reset the micro-processor. In actual sets, short-circuit the test mode set pins.

Release : Without the test mode diode, reset the micro-processor. In actual sets, open the test mode set pins.

#### (2) Contents of test mode

- **Volume Up/Down operation**  
The operation attenuation level can be set at 3 points; 0dB, -28dB, and -∞dB.
- **Rear volume Up/Down operation**  
The operation level can be set at 3 points; -20dB, 0dB, and + 20dB.
- **Balance operation**  
Operation mode can be set at 3 points; L, center, and R.
- **EQ (Equalizer) Up/Down operation**  
The operation level can be set at 3 points; + 12dB, 0dB, and -12dB for each frequency band.

#### ● Setting of the tuner adjustment frequency

Preset channel	Contents		Preset channel	Contents	
	K type	E type		K type	E type
1	FM 87.5MHz	FM 87.5MHz	11	AM 530kHz	AM 531kHz
2	FM 89.1MHz	FM 89.1MHz	12	AM 630kHz	AM 630kHz
3	FM 90.0MHz	FM 90.0MHz	13	AM 990kHz	AM 990kHz
4	FM 92.0MHz	FM 92.0MHz	14	AM 1440kHz	AM 1440kHz
5	FM 94.0MHz	FM 94.0MHz	15	AM 1610kHz	AM 1602kHz
6	FM 98.0MHz	FM 98.0MHz	16	—	—
7	FM 100.1MHz	FM 100.1MHz	17	—	—
8	FM 102.0MHz	FM 102.0MHz	18	—	—
9	FM 106.0MHz	FM 106.0MHz	19	—	—
10	FM 108.0MHz	FM 108.0MHz	20	—	—

### Initialization

#### (1) Amplifier section

- AUDIO SELECTOR : TUNER
- TAPE 2 : OFF
- VIDEO SELECTOR : VIDEO 1
- Volume : -56dB
- Rear volume : 0dB
- Balance : center position
- MM/MC selector : MM
- AUDIO INJECTION : OFF
- Through dubbing : OFF
- SURROUND selector : OFF (DOLBY is selected when turned ON)

#### (2) Graphic Equalizer (EQ) section

- EQ memory mode : PGM
- EQ memory channel : Last memory setting (not preset channel)

- EQ status : ±0dB, FLAT
- Contents of EQ program memory : ±0dB, FLAT for all channels
- When SET mode is activated, "A" is recalled.
- INC/DEC : None
- EQ : OFF
- EQ REC : OFF

#### (3) Tuner section

- Receiving frequency : FM lower limit
- AUTO mode
- SEEK LEVEL : High
- CATV : OFF
- Preset function : 1 to 10
- MUSIC SELECT : OFF
- Preset memory : All clear

## ADJUSTMENT

No.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	RECEIVER SETTINGS	ALIGNMENT POINTS	ALIGN FOR	FIG.
<b>F M SECTION</b>							
		INPUT SELECTOR: FM		MODE: STEREO			
1	DISCRIMINATOR (1)	(A) 98.0MHz 1kHz, $\pm 75$ kHz dev 60dB $\mu$ (ANT input)	Connect a DC voltmeter between TP4 and 5.	MONO 98.0MHz	L2 (X05-)	0V	(a)
2	DISCRIMINATOR (2)	(A) 98.0MHz 1kHz, $\pm 75$ kHz dev 60dB $\mu$ (ANT input)	(B)	MONO 98.0MHz	L3 (X05-)	Minimum distortion.	
Repeat alignments 1 and 2 several times.							
3	DISTORTION (STEREO)	(C) 98.0MHz 1kHz, $\pm 68.25$ kHz dev Selector: L or R Pilot: $\pm 6.75$ kHz dev 60dB $\mu$ (ANT input)	(B)	98.0MHz	IFT (Front end)	Minimum distortion.	
4	SEPARATION	(C) 98.0MHz 1kHz, $\pm 68.25$ kHz dev Selector: L or R Pilot: $\pm 6.75$ kHz dev 60dB $\mu$ (ANT input)	(B)	98.0MHz	VR2 (X05-)	Minimum crosstalk. A compromise adjustment may be required if left-to-right and right-to-left separations are unequal.	
5	TUNING LEVEL	(A) 98.0MHz 0 dev 13dB $\mu$ (ANT input)	-	AUTO or MONO 98.0MHz	VR1 (X05-)	Adjust VR1 and stop at the point where FL1(TUNED) goes on.	
<b>A M SECTION</b>							
		Keep the loop antenna installed.		INPUT SELECTOR: AM			
(1)	BAND EDGE (1)	-	Connect a DC voltmeter to TP3.	530kHz (531kHz)	L9 (X05-)	1.5V	(b)
(2)	BAND EDGE (2)	-	Connect a DC voltmeter to TP3.	1610kHz (1602kHz)	TC2 (X05-)	8.0V	(b)
Repeat alignments (1) and (2) several times.							
(3)	RF ALIGNMENT (1)	(D) 600(603)kHz 400Hz, 30% mod	(B)	600kHz (603kHz)	L8 (X05-)	Maximum amplitude and symmetry of the oscilloscope display.	
(4)	RF ALIGNMENT (2)	(D) 1400(1404)kHz 400Hz, 30% mod	(B)	1400kHz (1404kHz)	TC1 (X05-)	Maximum amplitude and symmetry of the oscilloscope display.	
Repeat alignments (3) and (4) several times.							
(5)	IF TRANSFORMER	(D) 1000(999)kHz 400Hz, 30% mod	(B)	1000kHz (999kHz)	L10 (X05-)	Maximum amplitude and symmetry of the oscilloscope display.	
<b>AUDIO SECTION</b>							
[1]	IDLE CURRENT	-	(E) Connect a DC voltmeter across CP1(L) CP2(R)	Main volume: 0	VR1(L) VR2(R) (X07-)	10mV	(c)
[2]	DOLBY SURROUND CENTER ADJUSTMENT	(F) Connect an AG(1kHz) to CD/AUX jack(L or R).	Connect an oscilloscope between TP8 and GND.	Main volume: 0 Increase the input level until the waveform clips.	VR4 (X05-)	Adjust so that the upper and lower waveform clips becomes symmetrical.	(d)
[3]	DOLBY SURROUND CLOCK LEAKAGE ADJUSTMENT	(F) Cut off the input signal level.	Connect an oscilloscope between TP8 and GND.	-	VR5 (X05-)	Adjust so that the height of the clock frequency(several 10kHz) becomes minimum.	(d)
Perform adjustment [3] after completion of adjustment [2].							
[4]	SPECTRUM ANALYZER SENSITIVITY ADJUSTMENT	(F) Connect an AG(12mV, 1kHz) to CD/AUX jack(L & R).	-	-	VR1 (X14-)	To the position so that the lowest level of the spectrum analyzer lights.	

## REGLAGE

N°	ITEM	REGLAGE DE L'ENTREE	REGLAGE DE LA SORTIE	REGLAGE DU AMPLI-TUNER	POINT DE L'ALIGNEMENT	ALIGNER POUR	FIG.
SECTION MF							
Sauf en cas d'indications spéciales, régler chaque commutateur comme suit: SELECTEUR DES ENTRESS: MF MODE: STEREO							
1	DISCRIMINATEUR (1)	(A) 98,0MHz 1kHz. $\pm 75$ kHz dév 60dB $\mu$ (Entrée ANT)	Relier un voltmètre CC entre les TP4 et TP5.	MONO 98,0MHz	L2 (X05-)	0V	(a)
2	DISCRIMINATEUR (2)	(A) 98,0MHz 1kHz. $\pm 75$ kHz dév 60dB $\mu$ (Entrée ANT)	(B)	MONO 98,0MHz	L3 (X05-)	Distorsion minimale.	
Répéter les points 1 et 2 plusieurs fois.							
3	DISTORSION (STEREO)	(C) 98,0MHz 1kHz. $\pm 68,25$ kHz dév Selection: L ou R Signal pilote: $\pm 6,75$ kHz dév 60dB $\mu$ (Entrée ANT)	(B)	98,0MHz	Tête H.F. IFT (X05-)	Distorsion minimale.	
4	SEPARATION	(C) 98,0MHz 1kHz. $\pm 68,25$ kHz dév Selection: L ou R Signal pilote: $\pm 6,75$ kHz dév 60dB $\mu$ (Entrée ANT)	(B)	98,0MHz	VR2 (X05-)	Diaphonie minimale. Un compromis de réglage peut être nécessaire si les séparation de gauche à droite et droite à gauche sont inégales.	
5	NIVEAU D'ACCORDER	(A) 98,0MHz 0 dév 13dB $\mu$ (Entrée ANT)	—	AUTO ou MONO 98,0MHz	VR1 (X05-)	Ajuster VR1 et arrêter le mouvement de VR1 au moment où le FL1(TUNED)s'allume.	
SECTION MA Laisser l'antenne bouche MA installée. SELECTEUR: AM							
(1)	BORD DE BANDE (1)	—	Relier un voltmètre CC au TP3.	530kHz (531kHz)	L9 (X05-)	1,5V	(b)
(2)	BORD DE BANDE (2)	—	Relier un voltmètre CC au TP3.	1610kHz (1602kHz)	TC2 (X05-)	8,0V	(b)
Répéter les points (1) et (2) plusieurs fois.							
(3)	ALIGNEMENT H.T. (1)	(D) 600(603)kHz 400Hz. 30% mod	(B)	600kHz (603kHz)	L8 (X05-)	Amplitude et symétrie maximale de l'affichage de l'oscilloscope.	
(4)	ALIGNEMENT H.T. (2)	(D) 1400(1404)kHz 400Hz. 30% mod	(B)	1400kHz (1404kHz)	TC1 (X05-)	Amplitude et symétrie maximale de l'affichage de l'oscilloscope.	
Répéter les points (3) et (4) plusieurs fois.							
(5)	TRANSFORMATEUR F.I.	(D) 1000(999)kHz 400Hz. 30% mod	(B)	1000kHz (999kHz)	L10 (X05-)	Amplitude et symétrie maximale de l'affichage de l'oscilloscope.	
SECTION AUDIO							
[1]	COURANA DE POLARISATION	—	(E) Connecter un voltmètre CC CP1(CP2)	Volume principal: 0	VR1 (G) VR2 (D) (X07-)	10mV	(c)
[2]	AJUSTEMENT CENTRAL DE L'ENVIRONNEMENT DOLBY	(F) Relier un AG(1kHz) au CD/AUX prise (L ou R).	Relier un oscilloscope entre les TP8 et GND.	Volume principal: 0 Augmenter le niveau d'entrée jusqu'à ce que la forme d'onde s'écrite.	VR4 (X05-)	Ajuster pour que les écarts des formes d'onde supérieure et inférieure soient symétriques.	(d)
[3]	AJUSTEMENT DE FUITE DE L'HORLOGE DE L'ENVIRONNEMENT DOLBY	(F) Couper le niveau de signal d'entrée.	Relier un oscilloscope entre les TP8 et GND.	—	VR5 (X05-)	Ajuster pour que la hauteur de la fréquence de l'horloge (plusieurs dizaines de kHz) devienne minimum.	(d)
Effectuer l'ajustement [3] après avoir terminé l'ajustement [2].							
[4]	AJUSTEMENT DE LA SENSIBILITE DE L'ANALYSEUR DE SPECTRE	(F) Relier un AG (12mV, 1kHz) au CD/AUX prise (L et R).	—	—	VR1 (X14-)	Sur la position où le niveau le plus bas de l'analyseur de spectre s'allume.	

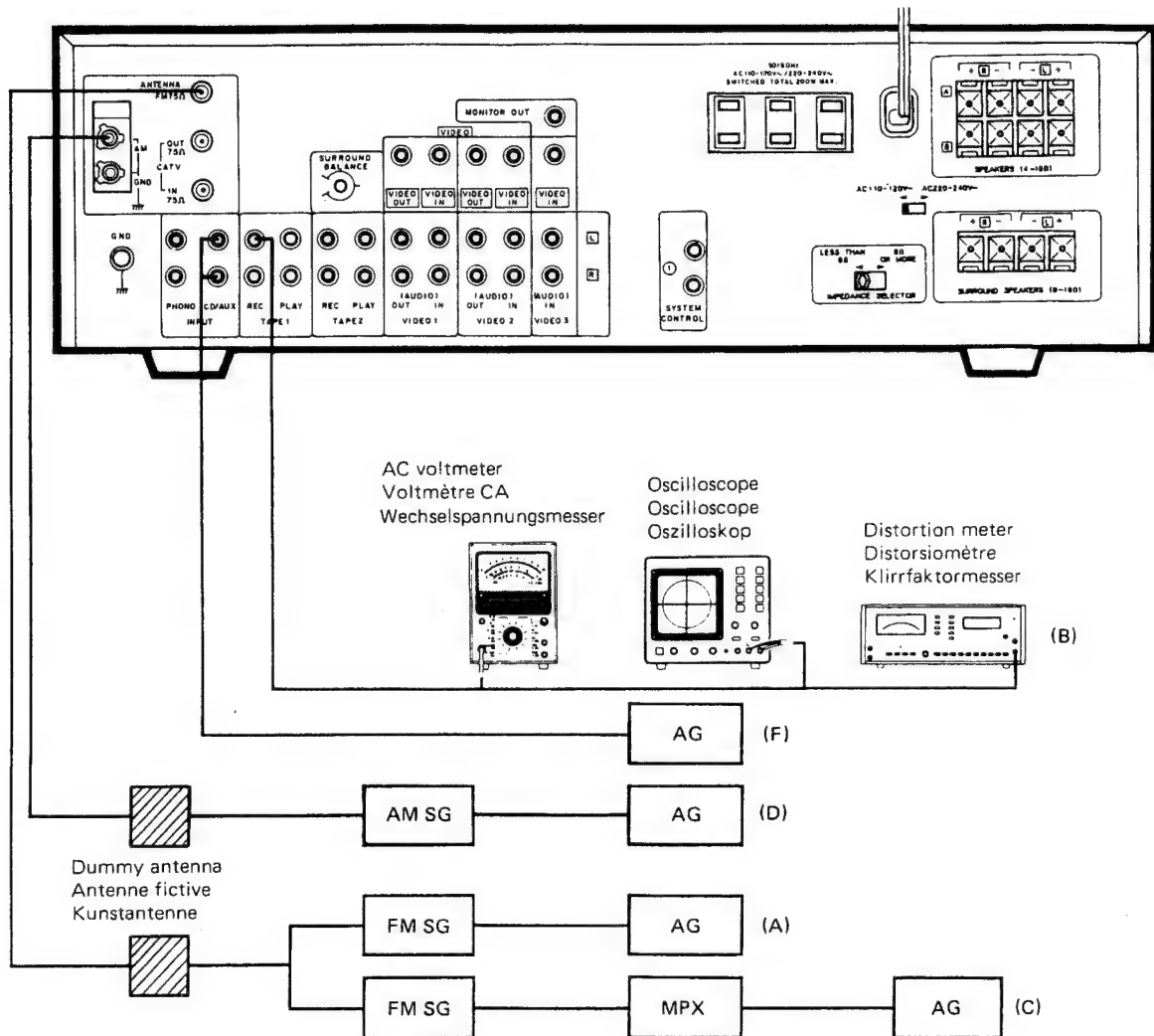


## ABGLEICH

NR.	GEGENSTAND	EINGANGS-EINSTELLUNG	AUSGANGS-EINSTELLUNG	RECEIVER-EINSTELLUNG	ABGLEICH-PUNKTE	ABGLEICHEN FÜR	ABB.
<b>UKW-EMPFANGSABTEILUNG</b> Außer wenn anders angegeben, die verschiedenen Schalter wie folgt einstellen: EINGANGSUMSCHALTER: FM      MODE: STEREO							
1	DISKRIMINATOR (1)	(A) 98,0MHz 1kHz, ±75kHz Hub 60dBu(ANT-Eingang)	Einen Gleichspannungsmesser zwischen TP4 und TP5 anschließen.	MONO 98,0MHz	L2 (X05-)	0V	(a)
2	DISKRIMINATOR (2)	(A) 98,0MHz 1kHz, ±75kHz Hub 60dBu(ANT-Eingang)	(B)	MONO 98,0MHz	L3 (X05-)	Minimal Klirrfaktor.	
Abstimmungen 1 und 2 mehrere Male wiederholen.							
3	KLIRRFAKTOR (STEREO)	(C) 98,0MHz 1kHz, ±68,25kHz Hub Wähler: L oder R Piloten: ±6,75kHz Hub 60dBu(ANT-Eingang)	(B)	98,0MHz	Frontende IFT (X05-)	Minimal Klirrfaktor.	
4	STEREO KANAL TRENNUNG	(C) 98,0MHz 1kHz, ±68,25kHz Hub Wähler: L oder R Piloten: ±6,75kHz Hub 60dBu(ANT-Eingang)	(B)	98,0MHz	VR2 (X05-)	Minimales Übersprechen. Eine Ausgleichregelung kann notwendig sein, falls links-zu-rechts und rechts-zu-links. Trennungen ungleich sind.	
5	ABSTIMM PEGEL	(A) 98,0MHz 0 Hub 13dBu(ANT-Eingang)	—	AUTO oder MONO 98,0MHz	VR1 (X05-)	Den Pegel wiederstand aufdrehen, und dem VR1 Halt geben wobei den FL1(TUNED) anzeiger leuchtet wird.	
<b>MW-EMPFANGSABTEILUNG</b> Die MW-Rahmenantenne angebracht lassen. WÄHLER: AM							
(1)	BANDKANTE (1)	—	Einen Gleichspannungsmesser zu TP3 anschließen.	530kHz (531kHz)	L9 (X05-)	1.5V	(b)
(2)	BANDKANTE (2)	—	Einen Gleichspannungsmesser zu TP3 anschließen.	1610kHz (1602kHz)	TC2 (X05-)	8.0V	(b)
Abstimmungen (1) und (2) mehrere Male wiederholen.							
(3)	HF-ABGLEICH (1)	(D) 600(603)kHz 400Hz, 30% mod	(B)	600kHz (603kHz)	L8 (X05-)	Maximal Amplitude und Symmetrie des Oszilloskopbildes.	
(4)	HF-ABGLEICH (2)	(D) 1400(1404)kHz 400Hz, 30% mod	(B)	1400kHz (1404kHz)	TC1 (X05-)	Maximal Amplitude und Symmetrie des Oszilloskopbildes.	
Abstimmungen (3) und (4) mehrere Male wiederholen.							
(5)	ZF-ÜBERTRAGER	(D) 1000(999)kHz 400Hz, 30% mod	(B)	1000kHz (999)kHz	L10 (X05-)	Maximal Amplitude und Symmetrie des Oszilloskopbildes.	
<b>AUDIO-ABTEILUNG</b>							
[1]	LEERLAUFSTROM	—	(E) Einen Gleichspannungsmesser über CPI(CP2)	Hauptlautstärke: 0	VR1 (L) VR2 (R) (X07-)	10mV	(c)
[2]	MITTEL-EINSTELLUNG DES DOLBY-RAUMKLANGS	(F) Einen AG(1kHz) zu CD/AUX Buchse anschließen. (L oder R)	Einen Oszilloskop zwischen TP8 und GND anschließen.	Hauptlautstärke: 0 Den Eingangsspegel erhöhen, bis die Wellenform abgeschnitten wird.	VR4 (X05-)	So einstellen, daß die Abschneidung der oberen und unteren Wellenform symmetrisch wird.	(d)
[3]	TAKTSTRENUNG-EINSTELLUNG DES DOLBY-RAUMKLANGS	(F) Den Eingangssignalpegel abschneiden.	Einen Oszilloskop zwischen TP8 und GND anschließen.	—	VR5 (X05-)	So einstellen, daß die Höhe der Taktfrequenz(einige 10kHz) minimal wird.	(d)
Die Einstellung[3] nach Beendigung der Einstellung[2] durchführen.							
[4]	EINSTELLUNG DER SPEKTRUM-ANALYSATOR-EMPFFINDLICHKEIT	(F) Einen AG(12mV, 1kHz) zu CD/AUX Buchse anschließen (L und R).	—	—	VR1 (X14-)	Auf die Position, so daß der niedrigste Pegel des Spektrumanalysators leuchtet.	

## ADJUSTMENT/REGLAGE/ABGLEICH

System connections/Raccordements du système/System-Anschlüsse



## VOLTAGE CHECK TABLE

### X05-352X-XX

#### IC1

1~3	3.0V	12	4.6V
4, 5	0V	13	1.3V
6	6.1V	14	0V
7~10	6.2V	15	0.42V
11	13.4V	16	0.47V

#### IC2

1	1.0V	11	2.7V
2	1.5V	12, 13	5.0V
6, 7	0V	14	0V
8	14.0V	15	1.1V
9	0.12V	16	0V
10	0V		

#### IC3

1	0.1V	11	0.7V
2	0.5V	12	0V
3	0.9V	13	2.0V
4	0V	14	12.4V
5	1.4V	15	1.6V
6	1.1V	16	0V
7, 8	1.4V	17	3.8V
9	2.7V	18, 19	1.3V
10	10.2V	20	0V

#### IC4

1~4	3.2V	14	4.9V
5	3.1V	15	0V
6, 7	3.2V	16	1.5V
8	3.1V	17	2.8V
9	3.2V	18	2.6V
10	0V	19, 20	2.7V
11	0.4V	21	3.4V
12	0V	22	13.5V
13	4.7V		

#### IC9

1	5.4V	5	-0.9V
2	0.5V	6, 7	-0.5V
3	-6.6V	8	-5.8V
4	-0.5V		

#### IC10

1	6.7V	6	-0.5V
2	-0.5V	7	0V
3, 4	-0.2V	8	-5.8V
5	-6.6V		

#### IC12

1~7	6.8V	13	1.2V
8	1V	14, 15	6.8V
9	0V	16	14V
10~12	6.8V		

#### IC14

3	0V	14	-22V
6	0V	16	0V
9	-22V		

	B	C	E
Q4	6.0V	14.1V	5.4V
Q5	0.12V	13.9V	1.4V
Q6	14.0V	1.4V	14.1V
Q7	13.9V	0V	-
Q8	4.6V	-	-
Q9	3.0V	-	-
Q10	0V	4.7V	-
Q13	-	CATV : 12V OTHER : 0V	-
Q14	0V	0.2V	-
Q15	3.9V	0V	-
Q17	14.9V	15.0V	14.1V

### X14-213X-XX

#### IC1

32	5V	45	5V
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#### IC2~5

8	-30V	9	5V
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#### IC8, 9

8	5V	9	-30V
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#### IC12

1	2.9V	10, 11	3.3V
2, 3	3.6V	12	4.3V
4	2.9V	13	0V
5~9	0V	14	5.6V

#### IC13

1	2.9V	7	0V
2, 3	3.3V	8~10	3.3V
4	2.9V	11	3.6V
5	0V	12, 13	0V
6	3.9V	14	5.6V

#### IC14~16

1~3	0.4V	5~7	0.4V
4	-1.51V	8	6.8V

#### IC17

1	-0.2V	4	-15.1V
2	-0.3V	5~7	0.4V
3	-0.4V	8	15.0V

	B	C	E
Q1~4	-	-	5V
Q7	-	4.3V	-

### X07-235X-XX

#### IC1

6	0.7V
---	------

	B	C	E
Q3, 4	-2.0V	-	-
Q15, 16	-	1.1V	-
Q19, 20	-	-1.1V	-
Q21, 22	-	54V	0.6V
Q23, 24	-	-5.4V	-0.6V
Q25~28	-	-	0V
Q29	-	-	54V

### X09-247X-XX

#### IC1

2, 3	11.6V	5, 6	11.6V
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#### IC2~4

1	-13.2V	28	5V
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#### IC5

1~3	0.03V	5~7	0.03V
4	-13.2V	8	15V

#### IC6

1	6.8V	15	5V
11~14	-6.8V		

#### IC7, 8

18	15V	20	-13.2V
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#### IC9

1~3	-2.4V	5~7	-2.4V
4	-13.2V	18	15V

#### IC10

4, 5	-13.2V	12	3.2V
8	-13.2V	13	15V

#### IC11

7	-8.5V	12	3.2V
8	-13.2V	13	15V

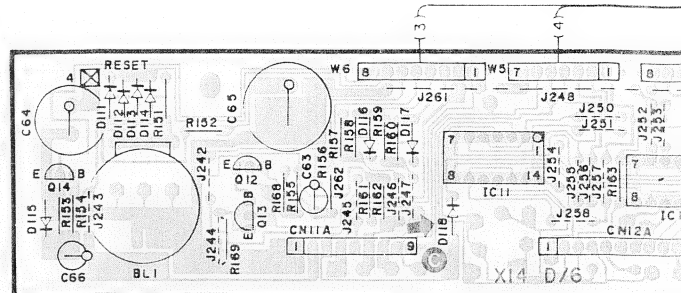
#### IC12

1	21V	2	15V
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	G	S	D
Q3~6	-	0.3V	11.6V

	B	C	E
Q13, 14	-2.3V	15V	-
Q15, 16	-	15V	-2.4V
Q20	-	-	15V
Q21, 22	-	15V	-
Q25, 26	-	-45V (-62V)	-33V
Q27	-	-32V	-33V
Q30	-	-13.2V	-13.2V
Q32	-	-	-13.2V
Q33	-	10.7V	5.6V
Q34	-	13V	5.6V



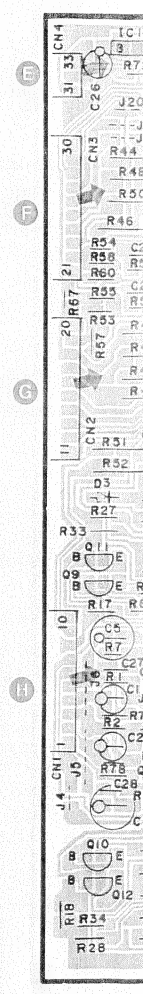
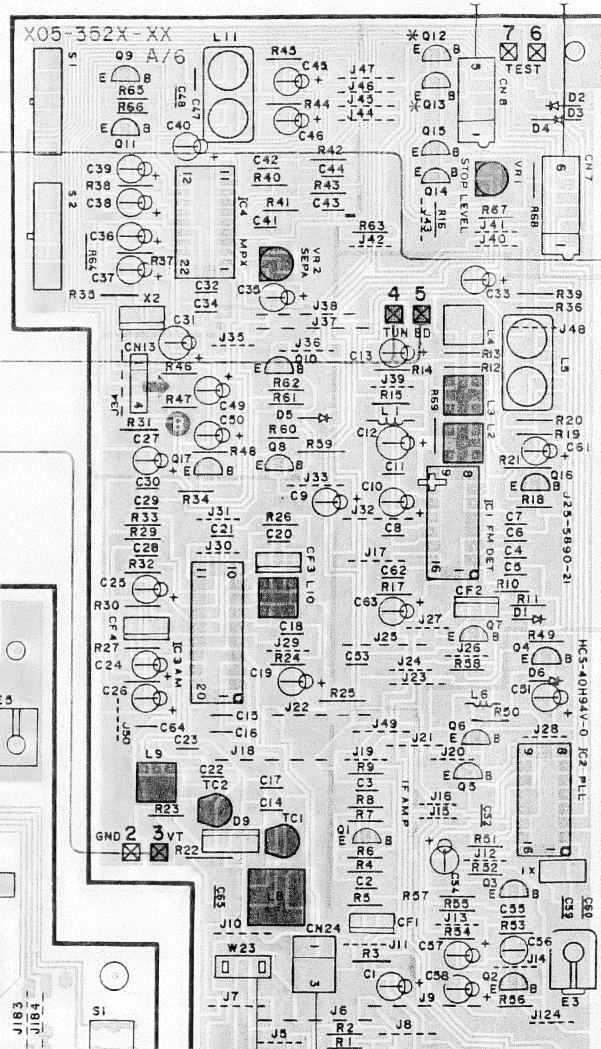


X14-213X-XX		B/6	
DESTINATION		Ref. NO	
KR-VI27R(K)	0-10	YES	YES
KR-VI07R(K)	0-13	NO	NO

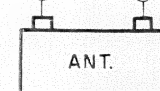


(b) BAND EDGE (1) : 1.5V  
BAND EDGE (2) : 8.0V

DC voltmeter



VIDEO OUT	VIDEO IN	VIDEO OUT	VIDEO IN	VIDEO IN
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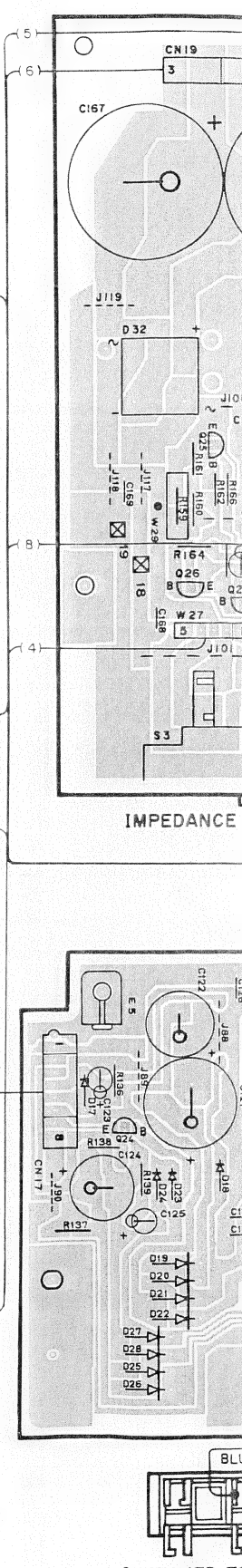
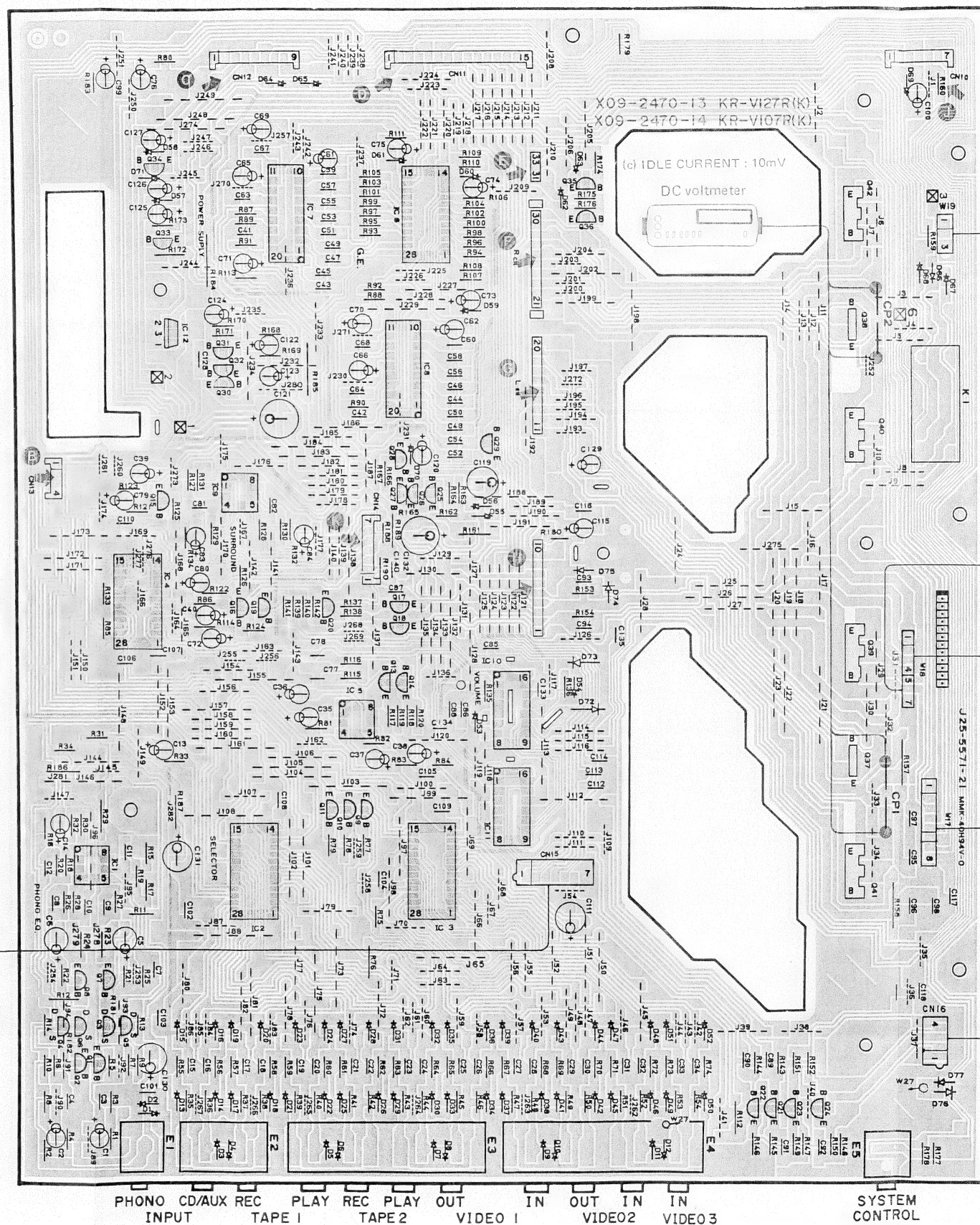
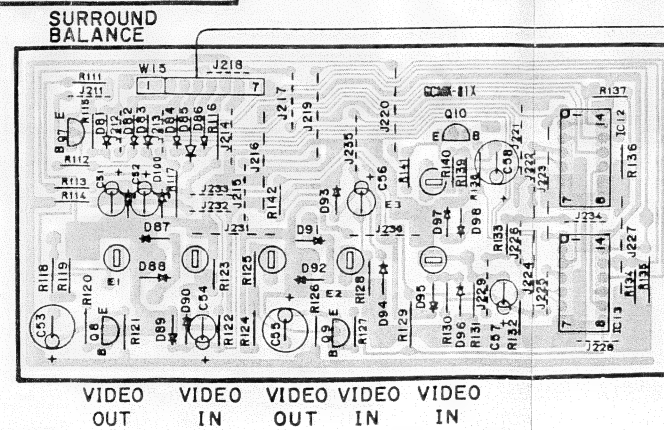
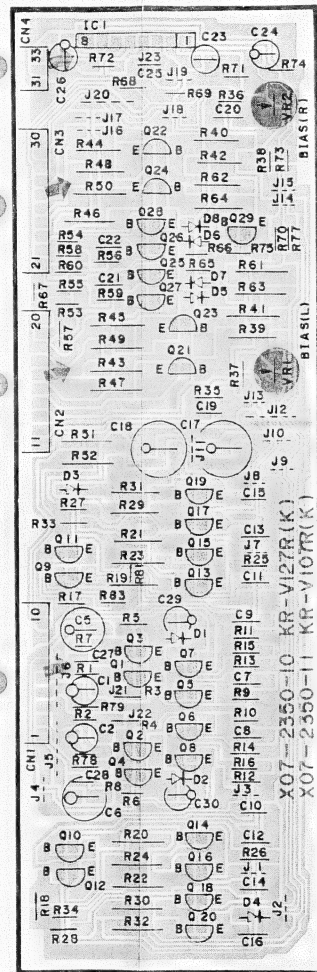
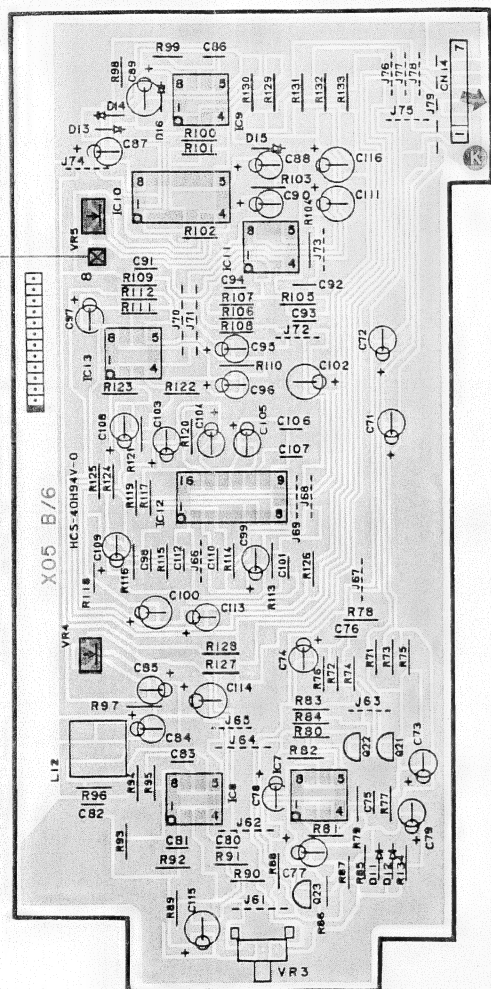
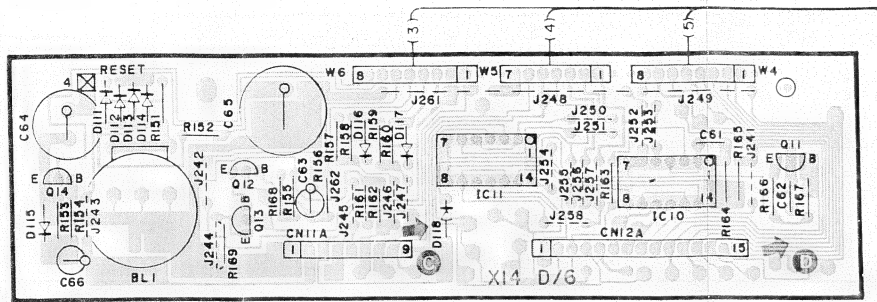


IN OUT FM  
75Ω 75Ω 75Ω

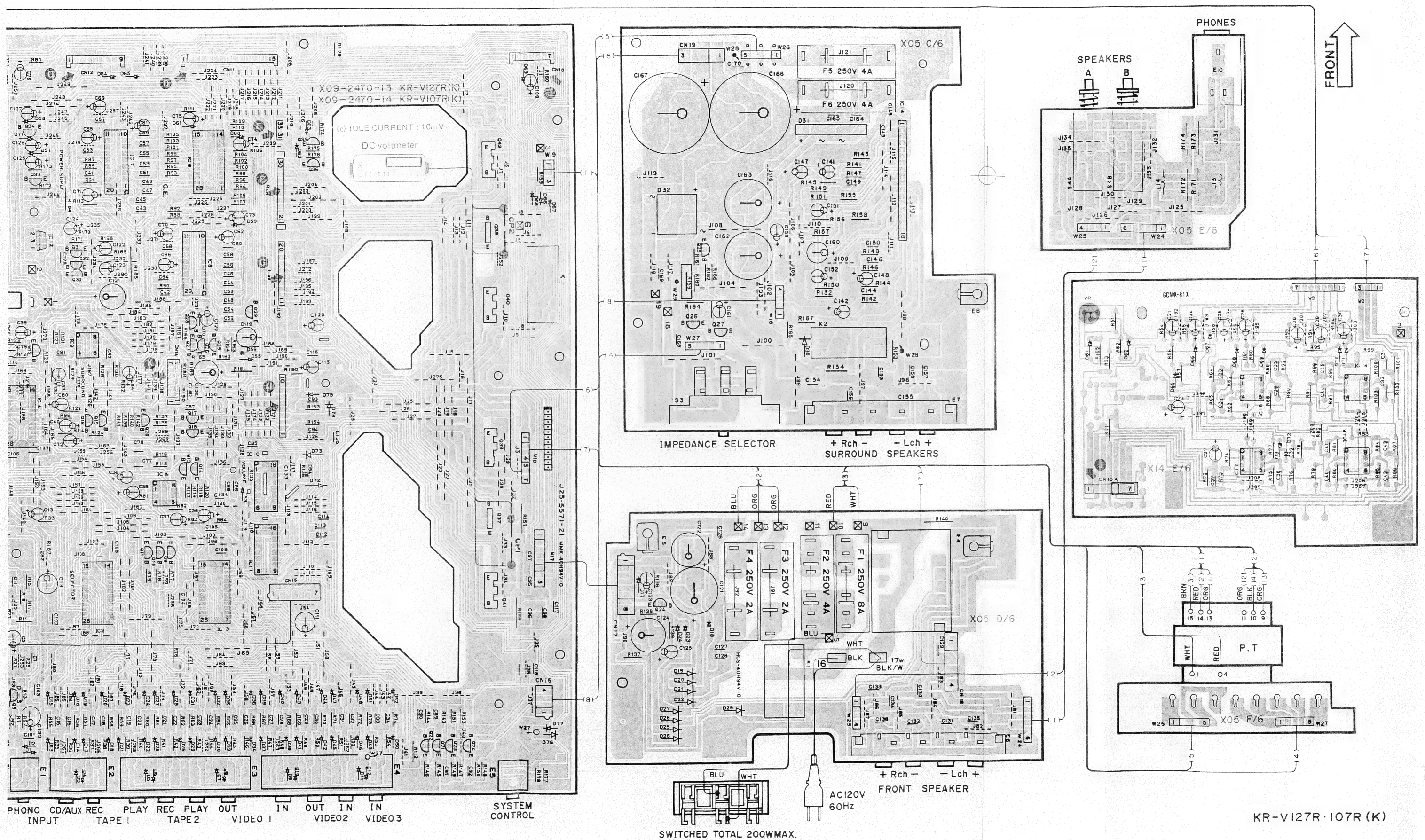
KR-VI27R(K) ONLY

— GND — AM KR-VI27R(K) ONLY





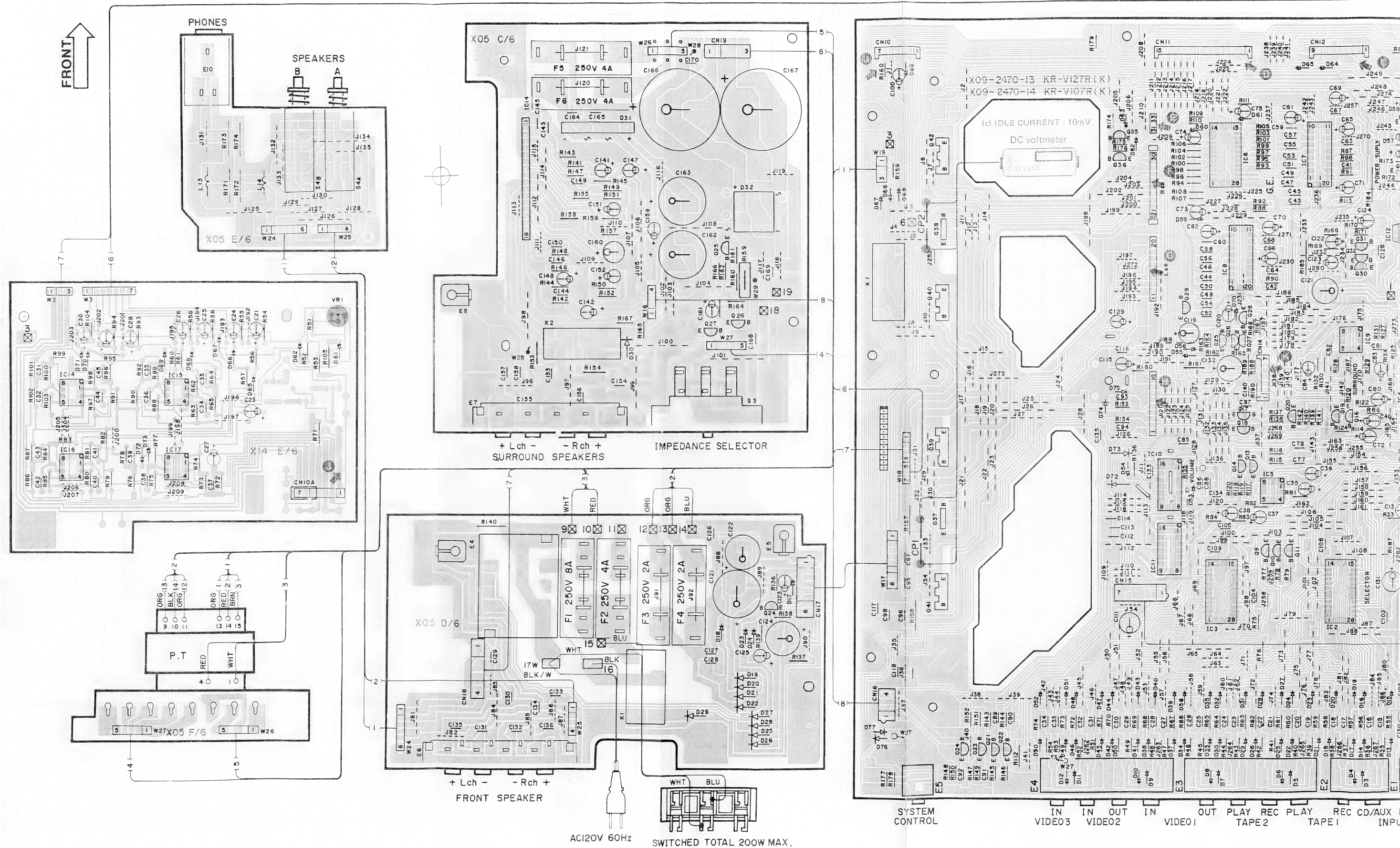




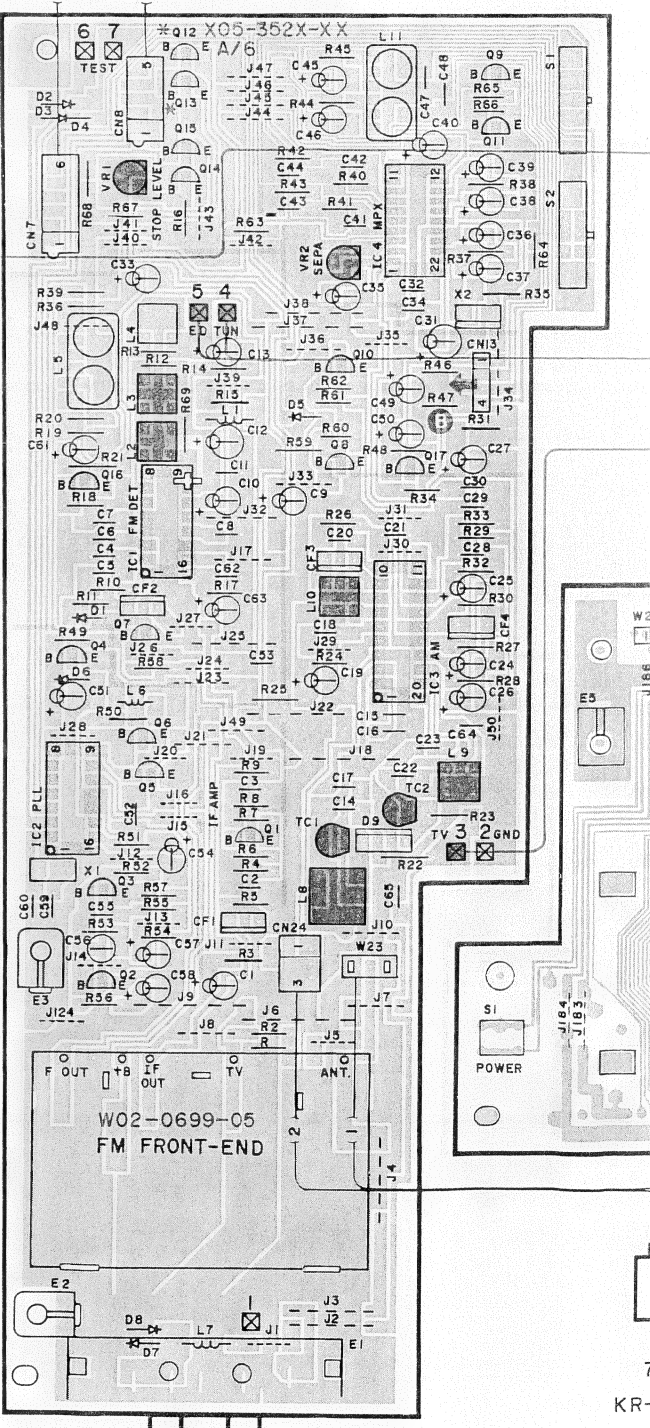
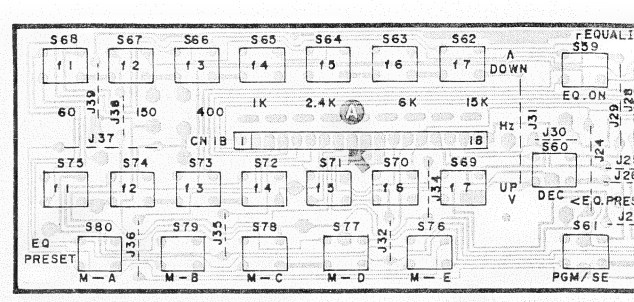
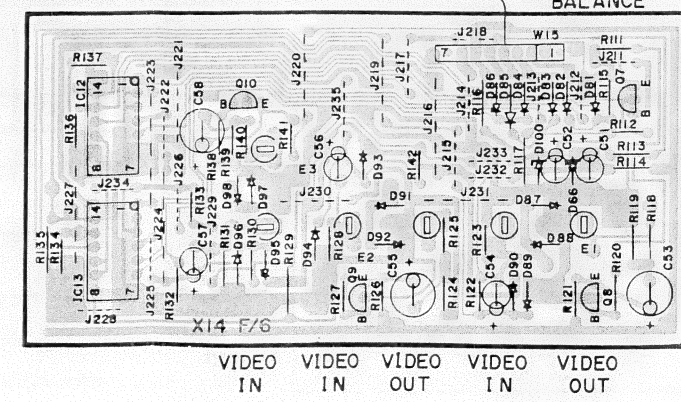
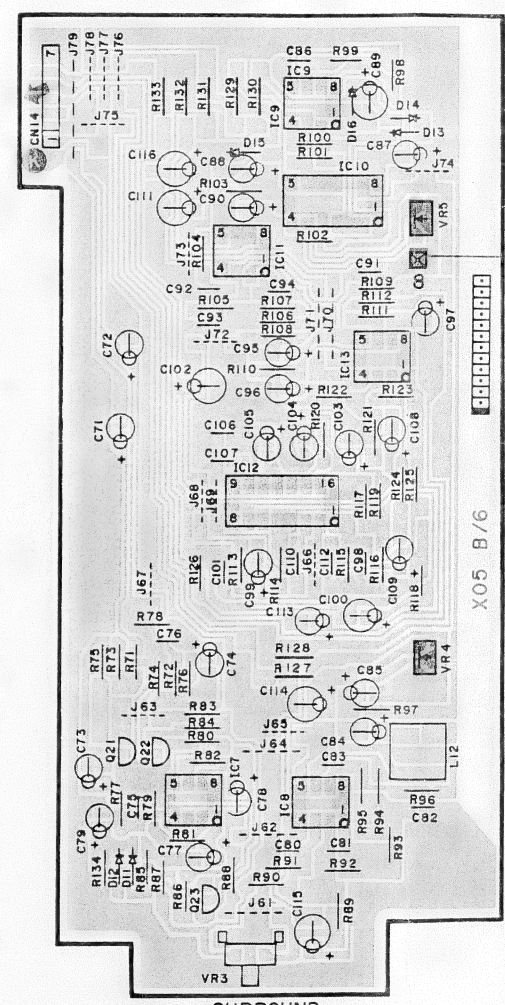
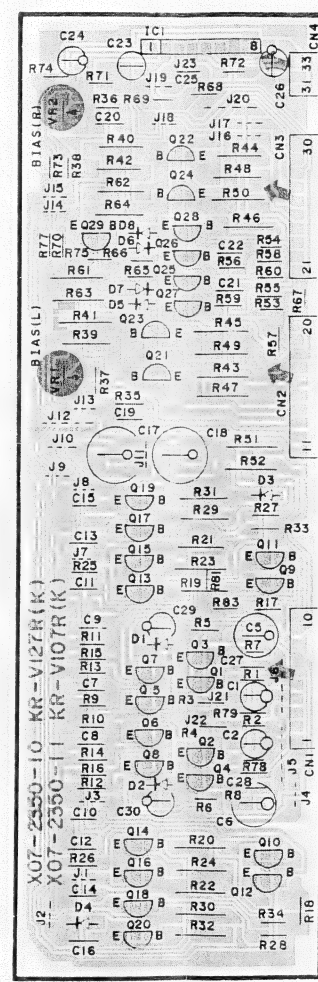
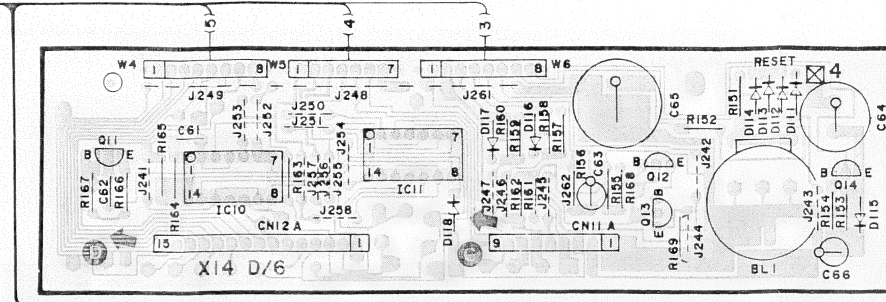
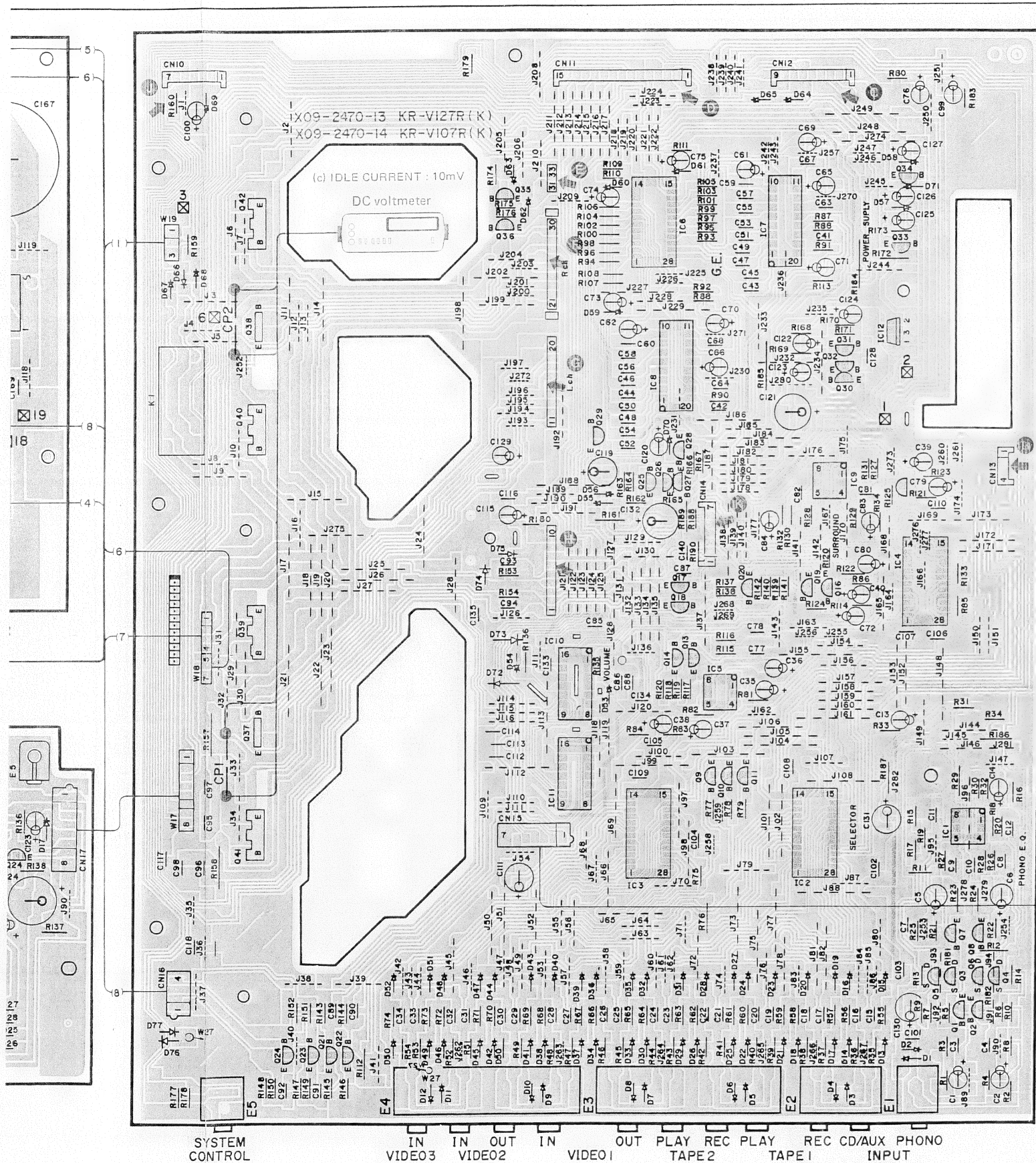
Refer to the schematic diagram for the values of resistors and capacitors.



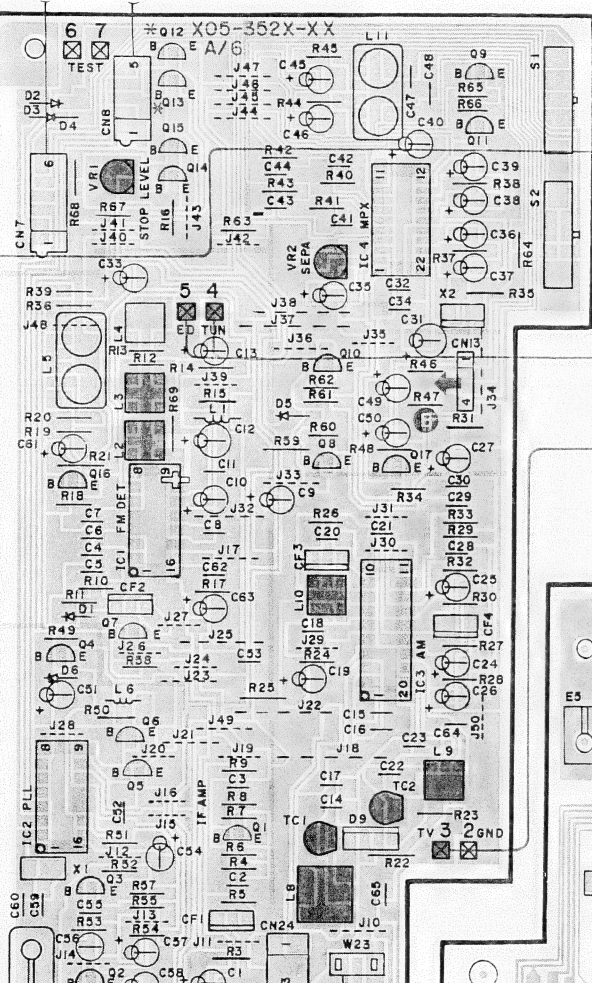
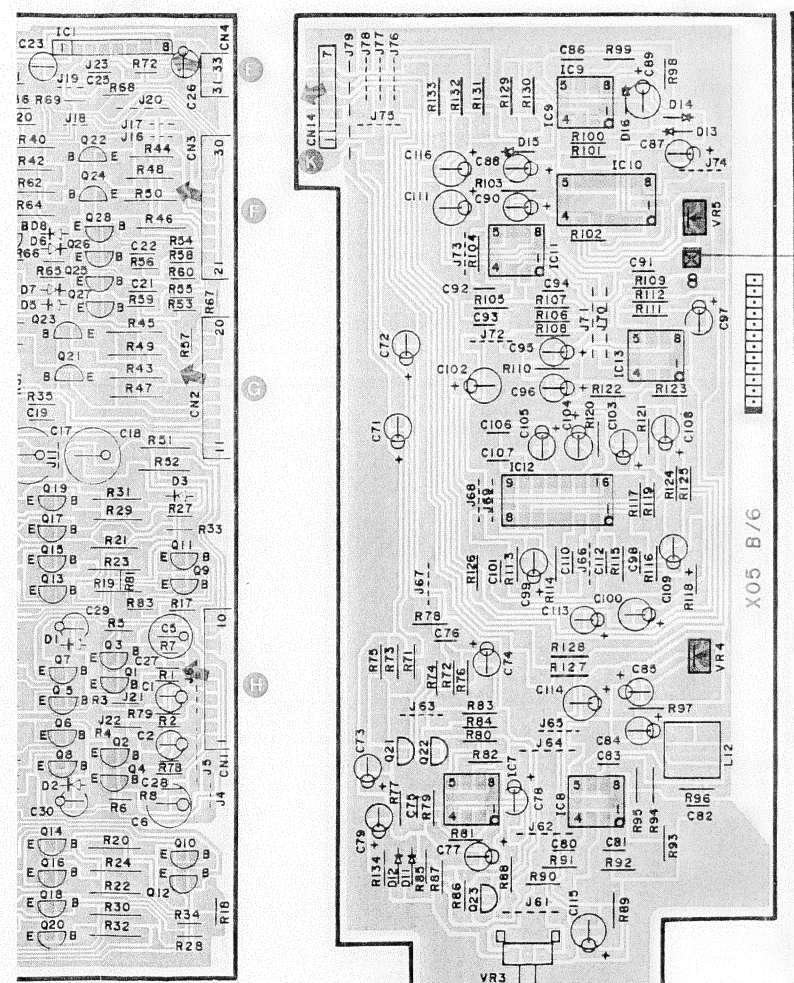
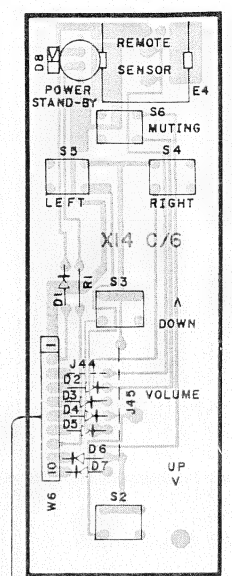
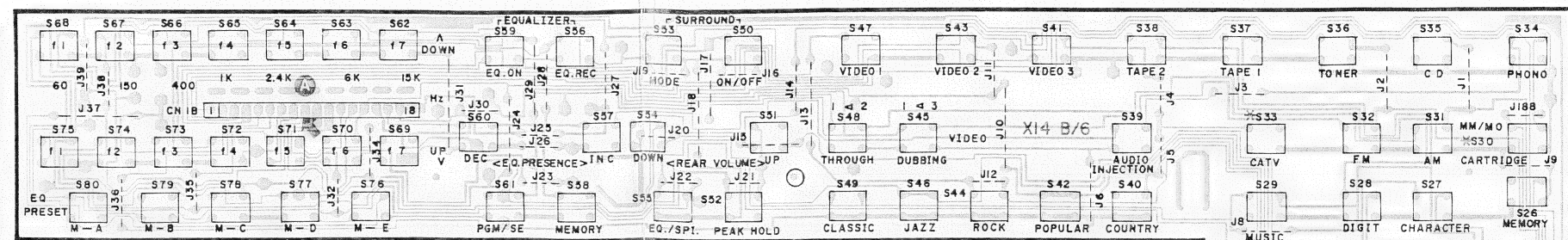
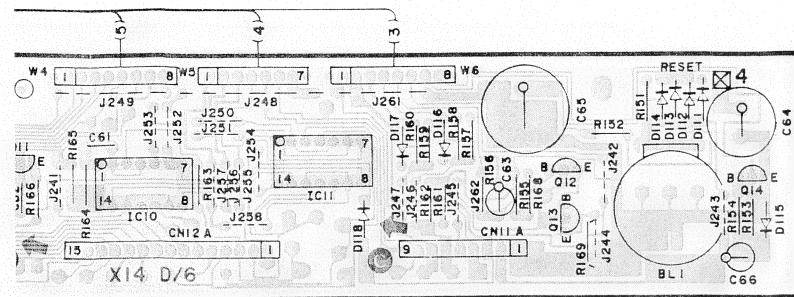
# PC BOARD (FOIL SIDE VIEW)





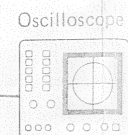






(d) DOLBY SURROUND CENTER ADJUSTMENT :  
Adjust so that the upper and lower waveform clips becomes symmetrical.

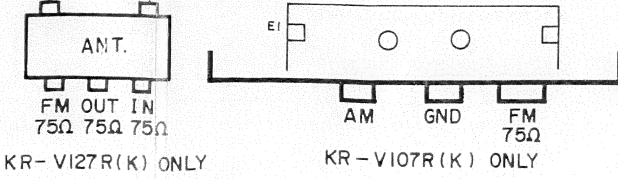
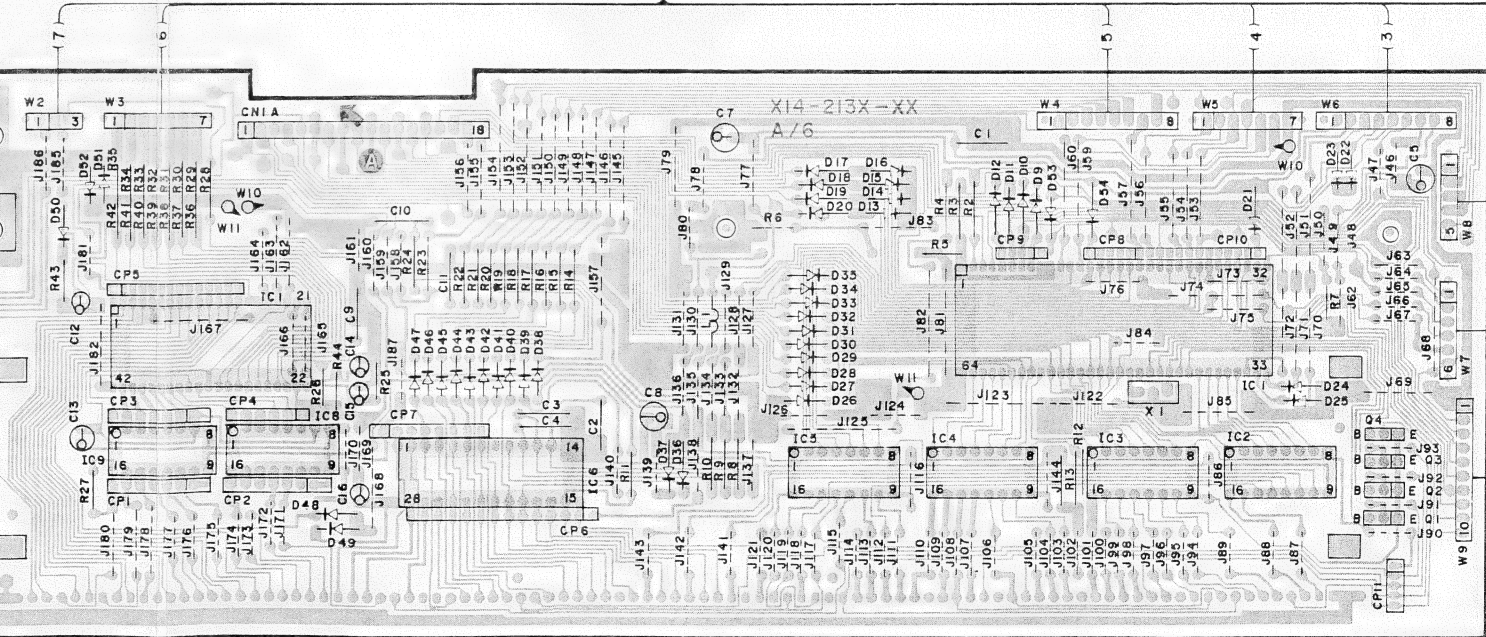
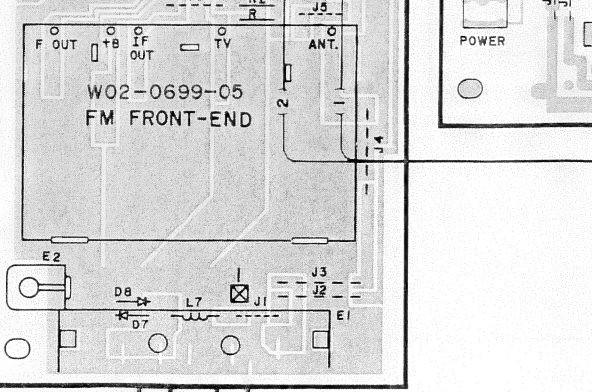
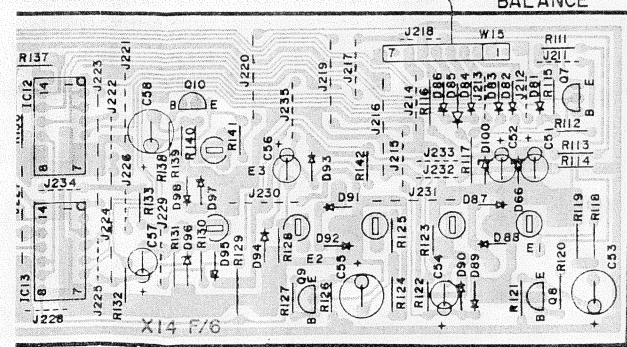
DOLBY SURROUND CLOCK LEAKAGE ADJUSTMENT :  
Adjust so that the height of the clock frequency (several 10kHz) becomes minimum.



(a) DISCRIMINATOR (1) : 0V  
(b) BAND EDGE (1) : 1.5V  
BAND EDGE (2) : 8.0V

DESTINATION	Ref. NO	Q12	Q13
KR-VI27R(K)	0-10	YES	YES
KR-VI07R(K)	0-11	NO	NO

DESTINATION	Ref. NO	S30	S33
KR-VI27R(K)	0-10	YES	YES
KR-VI07R(K)	0-13	NO	NO



KR-VI27R·VI07R(K)

Refer to the schematic diagram for the values of resistors and capacitors.



## X05-352X-XX

## IC1

1~3	3.0V	12	4.6V
4, 5	0V	13	1.3V
6	6.1V	14	0V
7~10	6.2V	15	0.42V
11	13.4V	16	0.47V

## IC2

1	1.0V	11	2.7V
2	1.5V	12,13	5.0V
6, 7	0V	14	0V
8	14.0V	15	1.1V
9	0.12V	16	0V
10	0V		

## IC3

1	0.1V	11	0.7V
2	0.5V	12	0V
3	0.9V	13	2.0V
4	0V	14	12.4V
5	1.4V	15	1.6V
6	1.1V	16	0V
7, 8	1.4V	17	3.8V
9	2.7V	18, 19	1.3V
10	10.2V	20	0V

## IC4

1~4	3.2V	14	4.9V
5	3.1V	15	0V
6, 7	3.2V	16	1.5V
8	3.1V	17	2.8V
9	3.2V	18	2.6V
10	0V	19, 20	2.7V
11	0.4V	21	3.4V
12	0V	22	13.5V
13	4.7V		

## IC9

1	5.4V	5	-0.9V
2	0.5V	6, 7	-0.5V
3	-6.6V	8	-5.8V
4	-0.5V		

## IC10

1	6.7V	6	-0.5V
2	-0.5V	7	0V
3, 4	-0.2V	8	-5.8V
5	-6.6V		

## IC12

1~7	6.8V	13	1.2V
8	1V	14, 15	6.8V
9	0V	16	14V
10~12	6.8V		

## IC14

3	0V	14	-22V
6	0V	16	0V
9	-22V		

	B	C	E
Q4	6.0V	14.1V	5.4V
Q5	0.12V	13.9V	1.4V
Q6	14.0V	1.4V	14.1V
Q7	13.9V	0V	-
Q8	4.6V	-	-
Q9	3.0V	-	-
Q10	0V	4.7V	-
Q13	-	CATV: 12V OTHER: 0V	-
Q14	0V	0.2V	-
Q15	3.9V	0V	-
Q17	14.9V	15.0V	14.1V

## X14-213X-XX

## IC1

32	5V	45	5V
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## IC2~5

8	-30V	9	5V
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## IC8, 9

8	5V	9	-30V
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## IC12

1	2.9V	10, 11	3.3V
2, 3	3.6V	12	4.3V
4	2.9V	13	0V
5~9	0V	14	5.6V

## IC13

1	2.9V	7	0V
2, 3	3.3V	8~10	3.3V
4	2.9V	11	3.6V
5	0V	12, 13	0V
6	3.9V	14	5.6V

## IC14~16

1~3	0.4V	5~7	0.4V
4	-1.51V	8	6.8V

## IC17

1	-0.2V	4	-15.1V
2	-0.3V	5~7	0.4V
3	-0.4V	8	15.0V

	B	C	E
Q1~4	-	-	5V
Q7	-	4.3V	-

## X07-235X-XX

## IC1

6	0.7V
---	------

	B	C	E
Q3, 4	-2.0V	-	-
Q15, 16	-	1.1V	-
Q19, 20	-	-1.1V	-
Q21, 22	-	54V	0.6V
Q23, 24	-	-5.4V	-0.6V
Q25~28	-	-	0V
Q29	-	-	54V

## X09-247X-XX

## IC1

2, 3	11.6V	5, 6	11.6V
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## IC2~4

1	-13.2V	28	5V
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## IC5

1~3	0.03V	5~7	0.03V
4	-13.2V	8	15V

## IC6

1	6.8V	15	5V
11~14	-6.8V		

## IC7, 8

18	15V	20	-13.2V
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## IC9

1~3	-2.4V	5~7	-2.4V
4	-13.2V	18	15V

## IC10

4, 5	-13.2V	12	3.2V
8	-13.2V	13	15V

## IC11

7	-8.5V	12	3.2V
8	-13.2V	13	15V

## IC12

1	21V	2	15V
---	-----	---	-----

	G	S	D
Q3~6	-	0.3V	11.6V

	B	C	E
Q13, 14	-2.3V	15V	-
Q15, 16	-	15V	-2.4V
Q20	-	-	15V
Q21, 22	-	15V	-
Q25, 26	-	-45V (-62V)	-33V
Q27	-	-32V	-33V
Q30	-	-13.2V	-13.2V
Q32	-	-	-13.2V
Q33	-	10.7V	5.6V
Q34	-	13V	5.6V

## (X05-352X-XX) (A/6)

DESTINATION	No.	C7	C41,42	C43,44	C65	R1,2	R7	R14	R34
K	0~10	330P	820P	NO	NO	NO	22	12K	22K
P	1~01	330P	820P	NO	NO	NO	22	12K	22K
U, UE	0~81	330P	560P	YES	NO	NO	22	22K	22K
E	2~71	560P	470P	NO	YES	YES	10	22K	15K

DESTINATION	No.	R40,41	R42,43	R67	R140	S1,2	D3	D4	Q12,13	①
K	0~10	91K	NO	YES	YES	NO	NO	NO	YES	NO
P	1~01	91K	NO	YES	YES	NO	NO	NO	YES	NO
U, UE	0~81	91K	YES	YES	YES	NO	YES	NO	YES	NO
E	2~71	100K	NO	NO	NO	NO	YES	NO	NO	YES

## (X05-333X-XX) (A/5)

IC1 : LA1235  
IC2 : LM7001  
IC3 : LA1245  
IC4 : LA3401

Q1 : 2SC1923 (R, O)  
Q2, 3 : 2SC1845 (F, E)  
Q4, 17 : 2SC2003 (L, K)  
Q5, 6, 13 : DTA124ES  
Q7~9, 12, 14, 15 : DTC114ES  
Q10, 11, 16 : 2SC945 (A) (Q, P) or 2SC1740S (Q, R)

D1~5, 7, 8 : ISS176 or ISS133  
D6 : RD6.2ES (B2) or HZS6.2N (B2)  
D9 : KVI236 (Z2)

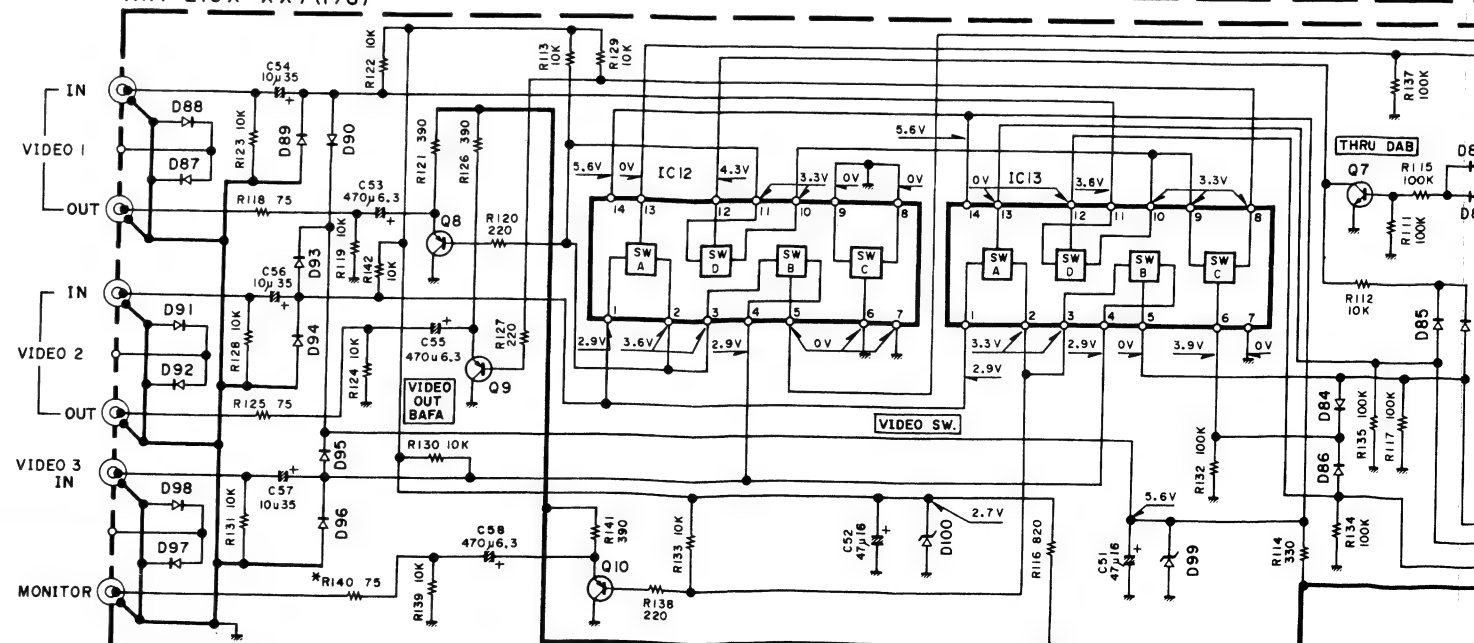
## (X14-213X-XX) (F/6)

IC12, 13 :  $\mu$ PD4066BC

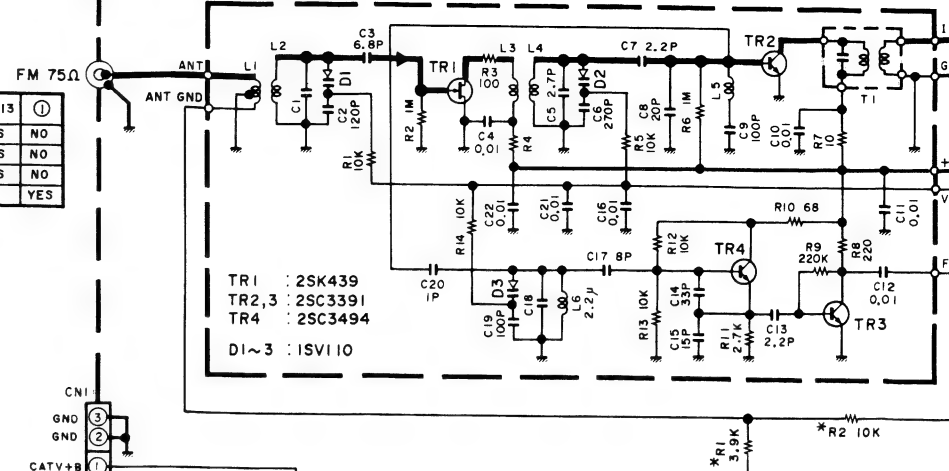
Q7 : 2SC945 (A) (Q, P)  
Q8~10 : 2SA999 (E, F)

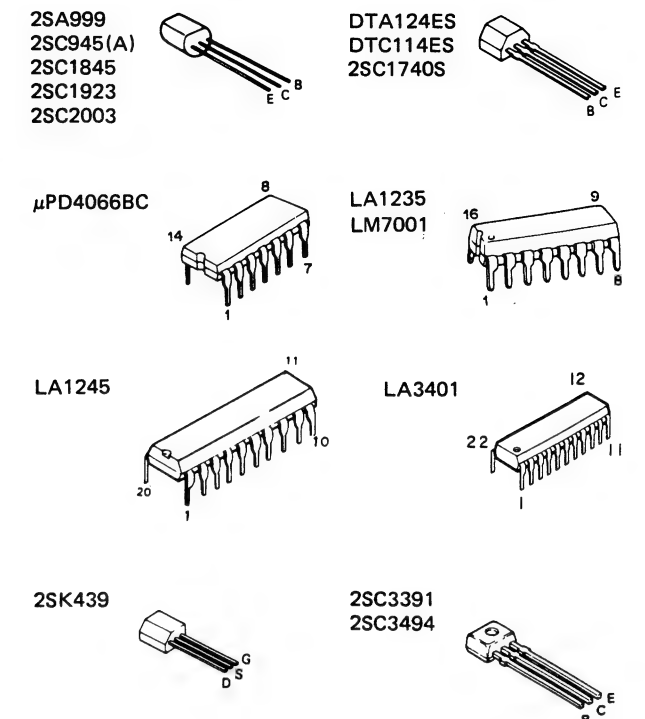
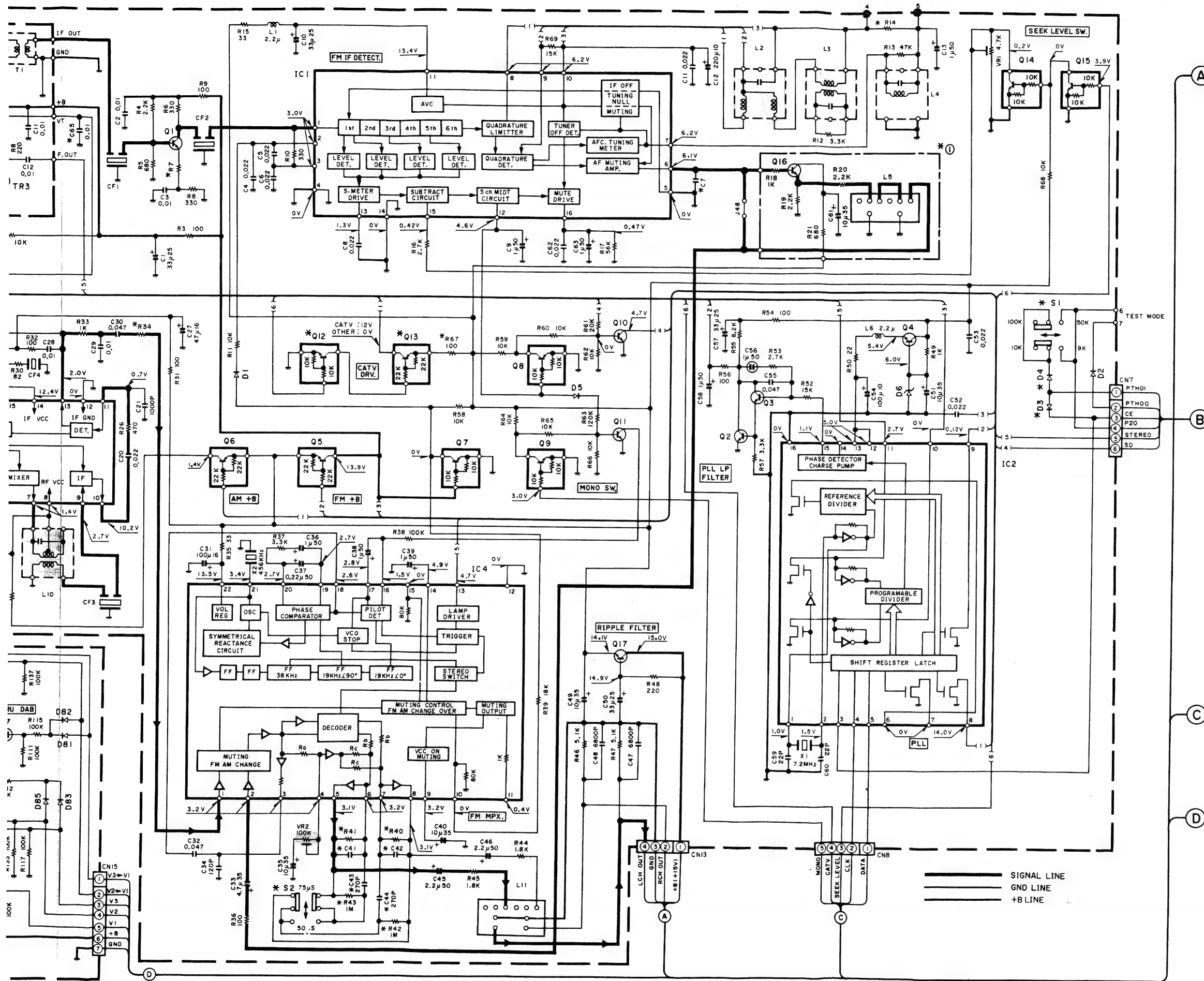
D81~98 : ISS176 or ISS133  
D99 : RD5.6ES (B2) or HZS5.6N (B2)  
D100 : RD2.7ES (B2) or HZS2.7N (B2)

## (X14-213X-XX) (F/6)

TUNER  
(X05-352X-XX) (A/6)

## (W02-0699-05)





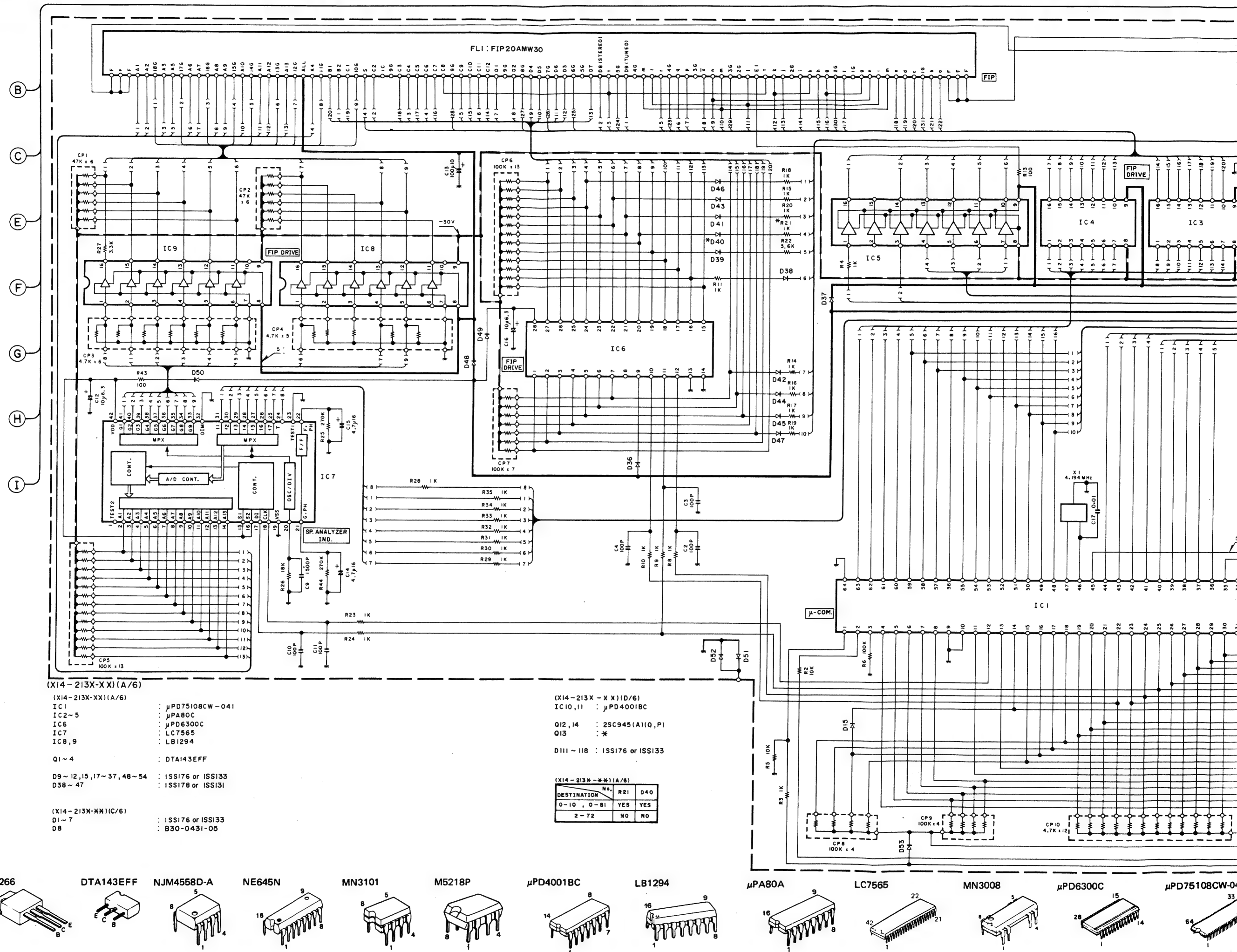
- DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or/and units.
- Les tensions c.c. doivent être mesurées avec un voltmètre à haute impédance. Les valeurs peuvent différer légèrement du fait des variations inhérentes aux appareils et aux instruments de mesure individuels.
- Die angegebenen Gleichspannungswerte wurden mit einem hochohmigen Voltmeter gemessen. Dabei schwanken die Meßwerte aufgrund von Unterschieden zwischen einzelnen instrumenten oder Geräten u.U. geringfügig.

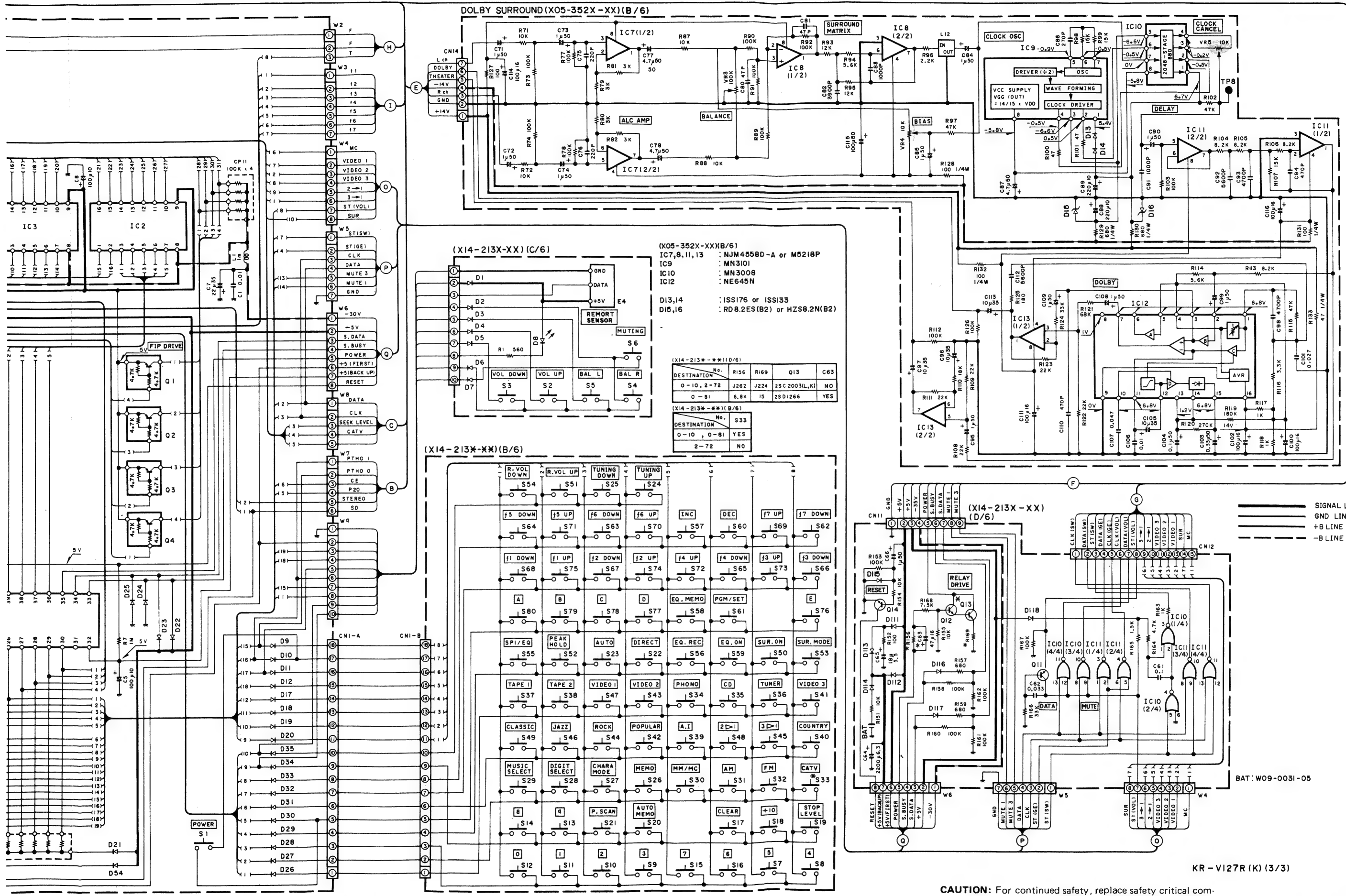
**CAUTION:** For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). ⚠ Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.











**PD75108CW-041**

33 32

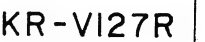
• DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or/and units.  
 • Les tensions c.c. doivent être mesurées avec un voltmètre à haute impédance. Les valeurs peuvent différer légèrement du fait des variations inhérentes aux

appareils et aux instruments de mesure individuels.  
 • Die angegebenen Gleichspannungswerte wurden mit einem hochohmigen Voltmeter gemessen. Dabei schwanken die Meßwerte aufgrund von Unterschieden zwischen einzelnen instrumenten oder Geräten u.U. geringfügig.

**CAUTION:** For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list).  $\Delta$  Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.



## EXPLODED VIEW



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# KR-V127R KR-V127R

## PARTS LIST

※ New Parts

Parts without Parts No. are not supplied.

Les articles non mentionnés dans le Parts No. ne sont pas fournis.

Telle ohne Parts No. werden nicht geliefert.

Ref. No. 参照番号	Address 位置	New Parts	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕向	Re- marks 備考
KR-V127R						
1	1A		A01-1546-01	METALLIC CABINET		
2	3A	*	A20-5538-02	PANEL	KPUUE	
2	3A	*	A20-5540-02	PANEL	E	
3	1B		A70-0207-05	REMOTE CONTROLLER ASSY	E	
3	1B	*	A70-0219-05	REMOTE CONTROLLER ASSY	KUUE	
3	1B	*	A70-0220-05	REMOTE CONTROLLER ASSY	P	
7	3B	*	B01-0390-02	PANEL ESCUTCHEON ASSY	KPUUE	
7	3B	*	B01-0392-02	PANEL ESCUTCHEON ASSY	E	
8	3B	*	B01-0393-01	PANEL ESCUTCHEON	KPUUE	
8	3B	*	B01-0395-01	PANEL ESCUTCHEON	E	
9	3A	*	B03-2458-04	DRESSING PLATE		
10	2A	*	B10-0945-03	FRONT GLASS		
-			B46-0092-03	WARRANTY CARD	K	
-			B46-0094-03	WARRANTY CARD	UUE	
-			B46-0095-03	WARRANTY CARD	UUE	
-			B46-0121-03	WARRANTY CARD	P	
-			B46-0122-13	WARRANTY CARD	E	
-		*	B50-8923-00	INSTRUCTION MANUAL	KUUE	
-		*	B50-8924-00	INSTRUCTION MANUAL	P	
-		*	B50-8925-00	INSTRUCTION MANUAL	E	
-			B58-0223-04	CAUTION CARD (PRE-SET 120V)	U	
-			B58-0513-04	CAUTION CARD (PRESET220-240)	UE	
-			B58-0803-13	CAUTION CARD	E	
-			B59-0092-00	SERVICE DIRECTORY	UUE	
-			CK45B1H102K	CERAMIC 1000PF K	E	
-			C91-0023-05	CERAMIC 0.01UF AC250V	UUE	
-			C91-0647-05	CERAMIC 0.01UF P	KPE	
Δ C1						
Δ 14	1D		E03-0055-05	AC OUTLET	E	
Δ 14	1D		E03-0086-05	AC OUTLET	KPUUE	
Δ 15	1D		E30-0459-05	AC POWER CORD	E	
Δ 15	1D		E30-0812-05	AC POWER CORD	UUE	
Δ 15	1D		E30-2209-05	AC POWER CORD	KP	
20	1B		E30-0977-05	CORD WITH PLUG	E	
21	1B		E30-1392-05	CORD WITH PLUG	E	
-		*	H01-7865-04	ITEM CARTON CASE		
-		*	H10-3604-02	POLYSTYRENE FOAMED FIXTURE		
-		*	H10-3605-02	POLYSTYRENE FOAMED FIXTURE		
-			H11-0006-04	POLYSTYRENE FOAMED BOARD		
-			H12-1164-04	PACKING FIXTURE		
-			H13-0008-04	CARTON BOARD		
-		*	H13-0016-04	CARTON BOARD	E	
-			H25-0181-04	PROTECTION BAG (150X260X0.05)		
-			H25-0224-04	PROTECTION BAG (800X400X0.03)		
-			H25-0232-04	PROTECTION BAG (235X350X0.03)		
28	3B, 3D		J02-0126-05	FOOT		
29	1B		J19-2815-04	ANTENNA HOLDER		
30	1D		J42-0083-05	POWER CORD BUSHING		
-			J61-0307-05	WIRE BAND		
34	2A		K27-1644-04	KN0B (BUTTON) SPEAKERS		
35	2A		K29-2333-04	KN0B (POWER)		
36	3A	*	K29-3206-03	KN0B (VIDEO, TAPE, TUN)		

E: Scandinavia & Europe K: USA P: Canada  
U: PX(Far East, Hawaii) T: England M: Other Areas  
UE: AAFES(Europe) X: Australia

Δ indicates safety critical components.

## PARTS LIST

※ New Parts

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Les articles non mentionnés dans le Parts No. ne sont pas fournis.

Telle ohne Parts No. werden nicht geliefert.

Ref. No. 参照番号	Address 位置	New Parts	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕向	Re- marks 備考
37	3A, 3B		K29-2668-04	KN0B (A-E, MUSIC, LEVEL)		
38	3B	*	K29-3207-04	KN0B (VOLUME)		
Δ 42	1C	*	L01-5241-05	POWER TRANSFORMER	K	
Δ 42	1C	*	L01-5242-05	POWER TRANSFORMER	E	
Δ 42	1C	*	L01-5245-05	POWER TRANSFORMER	UUE	
Δ 42	1C	*	L01-5247-05	POWER TRANSFORMER	P	
46	1D		N08-0128-35	BINDING POST (GND)		
C	2B, 2C		N29-0035-05	PUSH RIVET (3.5X5.5)		
Δ S1	1D		S31-2126-05	SLIDE SWITCH (POWER TYPE)	UUE	
Δ S1	1D		S31-2127-05	SLIDE SWITCH (POWER TYPE)	P	
50	1B		T90-0104-25	LOOP ANTENNA		
51	1B		T90-0121-05	T TYPE ANTENNA		
52	1B		T90-0136-05	ANTENNA ADAPTOR		
-			M50461-057SP	IC(REMOTE CONTROLLER)	E	
56	1D		W02-0741-15	ELECTRIC CIRCUIT MODULE	KPUUE	
57	2C		W09-0031-05	BATTERY		
TUNER UNIT (X05-352X-XX) 0-10 : K 1-01 : P 0-81 : U, UE 2-71 : E						
C1			CE04LW1E330M	ELECTRO 33UF 25WV		
C2 ,3			CK45FF1H103Z	CERAMIC 0.010UF Z		
C4 -6			CK45FF1H223Z	CERAMIC 0.022UF Z		
C7			CC45FSL1H331J	CERAMIC 330PF J	KPUUE	
C7			CK45FB1H561K	CERAMIC 560PF K	E	
C8			CK45FF1H223Z	CERAMIC 0.022UF Z		
C9			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C10			CE04LW1E330M	ELECTRO 33UF 25WV		
C11			CK45FF1H223Z	CERAMIC 0.022UF Z		
C12			CE04LW1A221M	ELECTRO 220UF 10WV		
C13			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C14			CK45FF1H103Z	CERAMIC 0.010UF Z		
C15			CK45FB1H102K	CERAMIC 1000PF K		
C16			CK45FF1H473Z	CERAMIC 0.047UF Z		
C17 ,18			CK45FF1H223Z	CERAMIC 0.022UF Z		
C19			CE04LW1V100M	ELECTRO 10UF 35WV		
C20			CF92FV1H223J	MF 0.022UF J		
C21			CF92FV1H102J	MF 1000PF J		
C22			CC93FCH1H391J	CERAMIC 390PF J		
C23			CK45FF1H103Z	CERAMIC 0.010UF Z		
C24			CE04LW1H2R2M	ELECTRO 2.2UF 50WV		
C25			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C26			CE04LW1H3R3M	ELECTRO 3.3UF 50WV		
C27			CE04LW1C470M	ELECTRO 47UF 16WV		
C28 ,29			CF92FV1H103J	MF 0.010UF J		
C30			CF92FV1H473J	MF 0.047UF J		
C31			CE04LW1C101M	ELECTRO 100UF 16WV		
C32			CF92FV1H473J	MF 0.047UF J		
C33			CE04LW1V4R7M	ELECTRO 4.7UF 35WV		
C34			CC45FSL1H121J	CERAMIC 120PF J		
C35			CE04LW1V100M	ELECTRO 10UF 35WV		
C36			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C37			CE04LW1HR22M	ELECTRO 0.22UF 50WV		
C38 ,39			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C40			CE04LW1V100M	ELECTRO 10UF 35WV		

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C41 ,42			CK45FB1H471K	CERAMIC 470PF K	E	
C41 ,42			CK45FB1H561K	CERAMIC 560PF K	UUE	
C41 ,42			CK45FB1H821K	CERAMIC 820PF K	KP	
C43 ,44			CC45FSL1H271J	CERAMIC 270PF J	UUE	
C45 ,46			CE04LW1H2R2M	ELECTR0 2.2UF 50WV		
C47 ,48			CF92FV1H682J	MF 6800PF J		
C49			CE04LW1V100M	ELECTR0 10UF 35WV		
C50			CE04LW1E330M	ELECTR0 33UF 25WV		
C51			CE04LW1V100M	ELECTR0 10UF 35WV		
C52 ,53			CK45FF1H223Z	CERAMIC 0.022UF Z		
C54			CE04LW1A101M	ELECTR0 100UF 10WV		
C55			CF92FV1H473J	MF 0.047UF J		
C56			C90-1349-05	NP-ELEC 1UF 50WV		
C57			CE04LW1E330M	ELECTR0 33UF 25WV		
C58			CE04LW1H010M	ELECTR0 1.0UF 50WV		
C59 ,60			CC45FCH1H220J	CERAMIC 22PF J	E	
C61			CE04LW1V100M	ELECTR0 10UF 35WV		
C62			CK45FF1H223Z	CERAMIC 0.022UF Z		
C63			CE04LW1H010M	ELECTR0 1.0UF 50WV		
C64			CK45FF1H473Z	CERAMIC 0.047UF Z		
C65			CK45FF1H103Z	CERAMIC 0.010UF Z	E	
C71 -74			CE04LW1H010M	ELECTR0 1.0UF 50WV		
C75 ,76			CC45FSL1H221J	CERAMIC 220PF J		
C77 ,78			CE04LW1H4R7M	ELECTR0 4.7UF 50WV		
C80 ,81			CC45FSL1H470J	CERAMIC 47PF J		
C82			CF92FV1H392J	MF 3900PF J		
C83			CF92FV1H102J	MF 1000PF J		
C84 ,85			CE04LW1H010M	ELECTR0 1.0UF 50WV		
C86			CC45FSL1H271J	CERAMIC 270PF J		
C87			CE04LW1H4R7M	ELECTR0 4.7UF 50WV		
C88 ,89			CE04LW1A221M	ELECTR0 220UF 10WV		
C90			CE04LW1H010M	ELECTR0 1.0UF 50WV		
C91			CF92FV1H102J	MF 1000PF J		
C92			CF92FV1H562J	MF 5600PF J		
C93			CF92FV1H472J	MF 4700PF J		
C94			CK45FB1H471K	CERAMIC 470PF K		
C95			CE04LW1H010M	ELECTR0 1.0UF 50WV		
C96 ,97			CE04LW1V100M	ELECTR0 10UF 35WV		
C98			CF92FV1H472J	MF 4700PF J		
C99			CE04LW1H010M	ELECTR0 1.0UF 50WV		
C100			CE04LW1C101M	ELECTR0 100UF 16WV		
C101			CF92FV1H273J	MF 0.027UF J		
C102			CE04LW1C101M	ELECTR0 100UF 16WV		
C103			CE04LW1HR33M	ELECTR0 0.33UF 50WV		
C104			CE04LW1HOR1M	ELECTR0 0.1UF 50WV		
C105			CE04LW1V100M	ELECTR0 10UF 35WV		
C106			CF92FV1H103J	MF 0.010UF J		
C107			CF92FV1H473J	MF 0.047UF J		
C108,109			CE04LW1H010M	ELECTR0 1.0UF 50WV		
C110			CK45FB1H471K	CERAMIC 470PF K		
C111			CE04LW1C101M	ELECTR0 100UF 16WV		
C112			CF92FV1H562J	MF 5600PF J		
C113			CE04LW1V100M	ELECTR0 10UF 35WV		
C114-116			CE04LW1C101M	ELECTR0 100UF 16WV		
C121			CE04LW1E332M	ELECTR0 3300UF 25WV	KPE	

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C121		*	CE04LW1V332M	ELECTR0 3300UF 35WV	UUE	
C122			CE04LW1V102M	ELECTR0 1000UF 35WV		
C123			CE04LW1H4R7M	ELECTR0 4.7UF 50WV		
C124		*	CE04LW1E331M	ELECTR0 330UF 25WV	KPE	
C124			CE04LW1V102M	ELECTR0 1000UF 35WV	UUE	
C125			CE04LW1H4R7M	ELECTR0 4.7UF 50WV		
C126			CK45FF1H473Z	CERAMIC 0.047UF Z	E	
C127,128			CK45FF1H103Z	CERAMIC 0.010UF Z		
C129,130			CK45FB1H102K	CERAMIC 1000PF K	E	
C131,132			CK45FF1H472Z	CERAMIC 4700PF Z	E	
C133,134			CK45FB1H102K	CERAMIC 1000PF K	E	
C135,136			CK45FF1H472Z	CERAMIC 4700PF Z	E	
C141,142			CE04LW1H010M	ELECTR0 1.0UF 50WV		
C143,144			CC45FSL1H331J	CERAMIC 330PF J		
C145,146			CC45FSL1H101J	CERAMIC 100PF J	KPUUE	
C145,146			CC45FSL1H221J	CERAMIC 220PF J	E	
C147,148			CE04LW1A101M	ELECTR0 100UF 10WV		
C149,150			CC45FSL1H050C	CERAMIC 5.0PF C		
C151,152			CE04LW1C470M	ELECTR0 47UF 16WV		
C153,154			CF92FV1H104J	MF 0.10UF J		
C155,156			CK45FF1H472Z	CERAMIC 4700PF Z	E	
C157,158			CK45FB1H102K	CERAMIC 1000PF K	E	
C159			CE04LW1V100M	ELECTR0 10UF 35WV		
C160		*	CE04LW1V101M	ELECTR0 100UF 35WV		
C161		*	CE04LW1V470M	ELECTR0 47UF 35WV		
C162,163			CE04LW1E332M	ELECTR0 3300UF 25WV	KPE	
C162,163		*	CE04LW1V332M	ELECTR0 3300UF 35WV	UUE	
C164,165			CK45FF1H103Z	CERAMIC 0.010UF Z		
C166,167		*	C90-1665-05	ELECTR0 7500UF 80WV		
C168,169			CK45FF1H103Z	CERAMIC 0.010UF Z		
C170			CK45FF1H473Z	CERAMIC 0.047UF Z		
C171,172			CK45FB1H102K	CERAMIC 1000PF K	E	
TC1 ,2			C05-0303-05	CERAMIC TRIMER CAPACITOR(20PF)		
E1	2D		E20-0231-05	SCREW TERMINAL BOARD(2P)AM,GND	KPUUE	
E1	2D		E20-0318-05	SCREW TERMINAL BOARD(2P)	E	
E6	1D		E20-0823-05	LOCK TERMINAL BOARD(8P) SP		
E7	1C		E20-0459-05	LOCK TERMINAL BOARD(4P) SURR		
E10	2B		E11-0162-05	PHONE JACK (3P)		
△ F1	1C		F05-3121-05	FUSE (SEM0) (250V T3,15A)	E	
△ F1	1C		F05-8029-05	FUSE (UL) (250V 8A)	KP	
△ F1 ,2	1C		F05-4022-05	FUSE (250V 4A)	UUE	
△ F3 ,4	1C		F06-2027-05	FUSE (UL) (250V 2A)	P	
△ F5 ,6	1C		F06-4024-05	FUSE (UL) (250V 4A)	KP	
61	1C		J13-0041-05	FUSE CLIP	KPUUE	
61	1C		J13-0054-05	FUSE CLIP	E	
△ 65	1C		L01-7651-05	POWER TRANSFORMER	KP	
△ 65	1C		L01-7652-05	POWER TRANSFORMER	E	
△ 65	1C		L01-7658-05	POWER TRANSFORMER	UUE	
CF1 ,2			L72-0531-05	CERAMIC FILTER	KPUUE	
CF1 ,2			L72-0536-05	CERAMIC FILTER	E	
CF3			L72-0099-05	CERAMIC FILTER		
CF4			L72-0096-05	CERAMIC FILTER		
L1			L40-2292-17	SMALL FIXED INDUCTOR(2.2UH,M)		
L2			L30-0464-05	FM IFT (DISCRIMINATOR)		

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L3 L4 L5 L6 L7			L30-0465-05 L39-0128-05 L79-0125-05 L40-2292-17 L40-1092-17	FM IFT (DISCRIMINATOR) PEAKING COIL LC FILTER SMALL FIXED INDUCTOR(2.2UH,M) SMALL FIXED INDUCTOR(1UH,M)	E	
L8 L9 L10 L11 L12			L31-0509-05 L32-0277-15 L30-0362-05 L79-0739-05 L79-0312-05	MW-RF COIL (RF ALIGNMENT) MW OSCILLATING COIL(BAND EDGE) AM IFT (IF TRANSFORMER) LC FILTER LC FILTER		
L13 ,14 X1 X2			L39-0085-05 L77-1122-05 L78-0208-05	PHASE-COMPENSATION COIL CRYSTAL RESONATOR RESONATOR (456KHZ)		
K	1C		N09-1236-05	TAPPING SCREW (3X16)		
R3 R15 R31 R35 R50			RD14GB2E101J RD14GB2E330J RD14GB2E101J RD14GB2E330J RD14GB2E220J	FL-PROOF RD 100 J 1/4W FL-PROOF RD 33 J 1/4W FL-PROOF RD 100 J 1/4W FL-PROOF RD 33 J 1/4W FL-PROOF RD 22 J 1/4W		
R127,128 R129,130 R131,132 R133 R137			RD14GB2E101J RD14GB2E681J RD14GB2E101J RD14GB2E470J RD14GB2E101J	FL-PROOF RD 100 J 1/4W FL-PROOF RD 680 J 1/4W FL-PROOF RD 100 J 1/4W FL-PROOF RD 47 J 1/4W FL-PROOF RD 100 J 1/4W		
R140 R153,154 R158 R159 R171,172			R92-0173-05 RS14KB3A4R7J RD14GB2E101J R92-0202-05 RS14KB3A4R7J	RC 2.2M M 1/2W FL-PROOF RS 4.7 J 1W FL-PROOF RD 100 J 1/4W METAL-PLATE 0.1 K 5W FL-PROOF RS 4.7 J 1W	KP	
R173,174 VR1 VR2 VR2 VR3			RS14KB3A561J R12-1089-05 R12-3128-05 R12-5058-05 R05-5012-05	FL-PROOF RS 560 J 1W TRIMMING POT. (TUNING LEVEL) TRIMMING POT. (SEPARATION) TRIMMING POT. (SEPARATION) POTENTIOMETER (BALANCE)	E KPUUE	
VR4 ,5			R12-3127-05	TRIMMING POT. (DOLBY SURROUND)		
△ K1 K2 S1 ,2 S3 S4	1C 1C 2D	*	SS1-1036-05 SS1-2078-05 S31-2074-05 S31-2136-05 S42-2152-05	MAGNETIC RELAY MAGNETIC RELAY SLIDE SWITCH (H.FM DE-EMP) SLIDE SWITCH (POWER TYPE) MULTIPLE PUSH SWITCH(SPEAKERS)	UUE KUUEE	
D1 -3 D1 -3 D1 ,2 D1 ,2 D4 ,5			1SS133 1SS176 1SS133 1SS176 1SS133	DIODE DIODE DIODE DIODE DIODE	E E KPUUE KPUUE UUE	
D4 ,5 D5 D5 D6 D6			1SS176 1SS133 1SS176 HZS6.2N(B2) RD6.2ES(B2)	DIODE DIODE DIODE ZENER DIODE ZENER DIODE	UUE KPE KPE	
D7 ,8 D7 ,8 D9			1SS133 1SS176 KV1236(Z2)	DIODE DIODE VARIABLE CAPACITANCE DIODE		

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D13 ,14 D13 ,14 D15 ,16 D15 ,16 D17			1SS133 1SS176 HZ58. 2N(B2) RDB. 2ES(B2) HZ55. 1N(B2)	DIODE DIODE ZENER DIODE ZENER DIODE ZENER DIODE		
D17 D18 D18 D19 -22 D19 -22			RD5. 1ES(B2) 1SS131 1SS178 DSM1A1 S5566B	ZENER DIODE DIODE DIODE DIODE DIODE		
D23 ,24 D23 ,24 D25 -30 D25 -30 D31			1SS131 1SS178 DSM1A1 S5566B D3SBA20F03	DIODE DIODE DIODE DIODE DIODE		
D31 D32 IC1 IC2 IC3			RBV-402LFA D5FB20*1 LA1235 LM7001 LA1245	DIODE DIODE IC(FM IF/DETECTION) IC(PLL FREQUENCY SYNTHESIZER) IC(AM)		
IC4 IC7 ,8 IC7 ,8 IC9 IC10			LA3401 M5218P NJM4558D-A MN3101 MN3008	IC(FM MPX) IC(OP AMP X2) IC(OP AMP X2) IC(BBD CLOCK DRIVER) IC(BBD)		
IC11 IC11 IC12 IC13 IC13			M5218P NJM4558D-A NE645N M5218P NJM4558D-A	IC(OP AMP X2) IC(OP AMP X2) IC(DOLBY B PROCESSOR) IC(OP AMP X2) IC(OP AMP X2)		
IC14 IC14 Q1 Q2 ,3 Q4		*	STK4112/2 STK4121/5 2SC1923(R,Ø) 2SC1845(F,E) 2SC2003(L,K)	IC(AF POWER AMP/ 10WX2) IC(AF POWER AMP/ 15X2) TRANSISTOR TRANSISTOR TRANSISTOR	KPUUE E	
Q5 ,6 Q7 -9 Q10 ,11 Q10 ,11 Q12			DTA124ES DTC114ES 2SC1740S(Q,R) 2SC945(A)(Q,P) DTC114ES	DIGITAL TRANSISTOR DIGITAL TRANSISTOR TRANSISTOR TRANSISTOR DIGITAL TRANSISTOR	KPUUE KPUUE	
Q13 Q14 ,15 Q16 Q16 Q17			DTA124ES DTC114ES 2SC1740S(Q,R) 2SC945(A)(Q,P) 2SC2003(L,K)	DIGITAL TRANSISTOR DIGITAL TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR	KPUUE E E	
Q24 Q25 Q25 Q26 Q26			2SA992(F,E) 2SA733(A)(Q,P) 2SA933S(Q,R) 2SC1740S(Q,R) 2SC945(A)(Q,P)	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR		
Q27			2SC2003(L,K)	TRANSISTOR		
69 69	2D 2D		W02-0699-05 W02-0700-05	FM FRONT-END ASSY FM FRONT-END ASSY	KPUUE E	

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<b>POWER AMPLIFIER UNIT (X07-235X-XX) 0-10 : K, P, U, <u>UE</u> 2-73 : E</b>						
C1 ,2			CE04LW1H010M	ELECTR0 1.0UF 50WV		
C5 ,6			CE04LW1C220M	ELECTR0 22UF 16WV		
C7 ,8			CF92FV1H113J	MF 0.011UF J		
C9 ,10			CC45FSL1H470J	CERAMIC 47PF J		
C11 ,12			CC45FSL1H100D	CERAMIC 10PF D		
C13 ,14			CC45FSL1H470J	CERAMIC 47PF J	KPUUE E	
C15 ,16			CC45FSL1H221J	CERAMIC 220PF J		
C15 ,16			CK45FB1H391K	CERAMIC 390PF K		
C17 ,18			CE04LW2A470M	ELECTR0 47UF 100WV		
C19 -22			CK45FF1H103Z	CERAMIC 0.010UF Z		
C23			C90-1333-05	NP-ELEC 22UF 10WV		
C24			CE04LW1C220M	ELECTR0 22UF 16WV		
C26			CE04LW1C330M	ELECTR0 33UF 16WV		
C27 ,28			CC45FSL1H220J	CERAMIC 22PF J	E	
C29 ,30			CE04LW1C220M	ELECTR0 22UF 16WV		
		*	J21-5022-04	MOUNTING HARDWARE		
R19 -22			RD14GB2E122J	FL-PROOF RD 1.2K J 1/4W		
R23 ,24			RD14GB2E181J	FL-PROOF RD 180 J 1/4W		
R29 -32			RD14GB2E221J	FL-PROOF RD 220 J 1/4W		
R39 -42			RD14GB2E220J	FL-PROOF RD 22 J 1/4W	KPUUE E	
R39 ,40			RD14GB2E220J	FL-PROOF RD 22 J 1/4W		
R41 ,42			RD14GB2E4R7J	FL-PROOF RD 4.7 J 1/4W	E	
R43 -46			RD14GB2E221J	FL-PROOF RD 220 J 1/4W		
R47 -50			RD14GB2E2R2J	FL-PROOF RD 2.2 J 1/4W		
R51			RD14GB2E220J	FL-PROOF RD 22 J 1/4W		
R52			RD14GB2E100J	FL-PROOF RD 10 J 1/4W		
R61			RD14GB2E101J	FL-PROOF RD 100 J 1/4W		
R64			RD14GB2E101J	FL-PROOF RD 100 J 1/4W		
VR1 ,2			R12-1070-05	TRIMMING POT. (1K) BIAS ADJ		
D1 ,2			HZ55.1N(B2)	ZENER DIODE		
D1 ,2			RD5.1ES(B2)	ZENER DIODE		
D3 ,4			1SS176	DIODE		
D5 -8			1SS178	DIODE		
D9 ,10			1SS178	DIODE		
IC1			UPC1237HA	IC (POWER AMP)		
Q1 -4			2SC1845(F,E)	TRANSISTOR		
Q5 -8			2SC945(A)(Q,P)	TRANSISTOR		
Q9 -12			2SC1845(F,E)	TRANSISTOR		
Q13 -18			2SA1123(R,S)	TRANSISTOR		
Q19 ,20			2SC2631(R,S)	TRANSISTOR		
Q21 ,22			2SC3944(Q,R)	TRANSISTOR		
Q23 ,24			2SA1535(Q,R)	TRANSISTOR		
Q25 ,26			2SC2631(R,S)	TRANSISTOR		
Q27 -29			2SA992(F,E)	TRANSISTOR		
<b>AUDIO UNIT (X09-247X-XX) 0-13 : K, P, U, <u>UE</u> 2-72 : E</b>						
C3 ,4			CC45FSL1H221J	CERAMIC 220PF J	KPUUE E	
C3 ,4			CC45FSL1H331J	CERAMIC 330PF J		
C5 ,6			CE04LW0J102M	ELECTR0 1000UF 6.3WV		
C7 ,8			CF92FV1H203J	MF 0.020UF J		
C9 ,10			CF92FV1H562J	MF 5600PF J		
C11 ,12			CK45FB1H331K	CERAMIC 330PF K	KPUUE E	
C11 ,12			CK45FF1H472Z	CERAMIC 4700PF Z		

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C13 ,14			CE04LW1V4R7M	ELECTR0 4.7UF 35WV		
C15 -34			CK45FB1H471K	CERAMIC 470PF K		
C35 ,36			CE04LW1HR47M	ELECTR0 0.47UF 50WV		
C37 ,38			CE04LW1V4R7M	ELECTR0 4.7UF 35WV		
C39 ,40			CE04LW1HR47M	ELECTR0 0.47UF 50WV		
C41 -44			CK45FB1H471K	CERAMIC 470PF K		
C45 ,46			CF92FV1H822J	MF 8200PF J		
C47 ,48			CF92FV1H152J	MF 1500PF J		
C49 ,50			CF92FV1H183J	MF 0.018UF J		
C51 ,52			CF92FV1H272J	MF 2700PF J		
C53 ,54			CF92FV1H563J	MF 0.056UF J		
C55 ,56			CF92FV1H822J	MF 8200PF J		
C57 ,58			CF92FV1H124J	MF 0.12UF J		
C59 ,60			CF92FV1H183J	MF 0.018UF J		
C61 ,62		*	CE04LW1HR33M	ELECTR0 0.33UF 50WV		
C63 ,64			CF92FV1H473J	MF 0.047UF J		
C65 ,66			CE04LW1H010M	ELECTR0 1.0UF 50WV		
C67 ,68			CF92FV1H124J	MF 0.12UF J		
C69 ,70			CE04LW1H2R2M	ELECTR0 2.2UF 50WV		
C71 -75			CE04LW1V4R7M	ELECTR0 4.7UF 35WV		
C76			CE04LW1V100M	ELECTR0 10UF 35WV		
C77 ,78			CF92FV1H104J	MF 0.10UF J		
C79 ,80			CE04LW1HR47M	ELECTR0 0.47UF 50WV		
C81 ,82			CF92FV1H153J	MF 0.015UF J		
C83 ,84			CE04LW1H010M	ELECTR0 1.0UF 50WV		
C85 ,86			CF92FV1H224J	MF 0.22UF J		
C87 ,88			CC45FSL1H101J	CERAMIC 100PF J		
C89 ,90			CF92FV1H473J	MF 0.047UF J		
C91 ,92			C90-1332-05	NP-ELEC 10UF 25WV		
C93 ,94			CC45FSL1H050C	CERAMIC 5.0PF C		
C95 -98			CF92FV1H104J	MF 0.10UF J		
C99			CE04LW0J101M	ELECTR0 100UF 6.3WV		
C100			CE04LW1H010M	ELECTR0 1.0UF 50WV		
C101-110			CK45FF1H103Z	CERAMIC 0.010UF Z		
C111			CE04LW1C221M	ELECTR0 220UF 16WV		
C112-114			CK45FF1H103Z	CERAMIC 0.010UF Z		
C115			CE04LW1H010M	ELECTR0 1.0UF 50WV		
C116-118			CK45FF1H103Z	CERAMIC 0.010UF Z		
C119			CE04LW1H470M	ELECTR0 47UF 50WV		
C120			CE04LW1A470M	ELECTR0 47UF 10WV		
C121		*	CE04LW1V102M	ELECTR0 1000UF 35WV		
C122-125			CE04LW1C470M	ELECTR0 47UF 16WV		
C126			CE04LW1A470M	ELECTR0 47UF 10WV		
C127			CE04LW1V100M	ELECTR0 10UF 35WV		
C128			CK45FB1H102K	CERAMIC 1000PF K		
C129			CE04LW1H010M	ELECTR0 1.0UF 50WV		
C130,131			CE04LW1C331M	ELECTR0 330UF 16WV		
C132			CE04LW2A470M	ELECTR0 47UF 100WV		
C133,134			CK45FF1H223Z	CERAMIC 0.022UF Z		
C135			CK45FB1H102K	CERAMIC 1000PF K		
C136,137			CC45SL1H100D	CERAMIC 10PF D	E	
C138,139			CK45F1H473Z	CERAMIC 0.047UF Z	E	
C140			CF92FV1H104J	MF 0.10UF J		
C141,142			CC45FSL1H330J	CERAMIC 33PF J	E	
C143-148			CC45FSL1H101J	CERAMIC 100PF J	E	

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E1	3D		E13-0235-05	PHONE JACK (2P)PHONE	KPUUE E	
E2	3D		E13-0446-05	PHONE JACK (4P)CD/AUX,TAPE		
E3 ,4	3D		E13-0819-05	PHONE JACK (8P)TAPE,VIDEO		
E5	2D		E11-0165-05	MINIATURE PHONE JACK(SYS CONT)		
E5	2D		E11-0168-05	MINIATURE PHONE JACK(SYS CONT)		
L1 ,2			L40-1011-47	SMALL FIXED INDUCTOR(100UH,K)	E	
H	1C,2C		NO9-0333-05	TAPPING SCREW (3X12)		
CP1 ,2			R90-0187-05	MULTI-COMP 0.22X2 K 5W		
R112			RD14GB2E220J	FL-PROOF RD 22 J 1/4W		
R157,158			RS14KB3D4R7J	FL-PROOF RS 4.7 J 2W		
R161			RD14GB2E221J	FL-PROOF RD 220 J 1/4W	E	
R172			RD14GB2E101J	FL-PROOF RD 100 J 1/4W		
R184			RS14KB3D151J	FL-PROOF RS 150 J 2W		
R185			RS14KB3D221J	FL-PROOF RS 220 J 2W		
R186,187			RD14GB2E101J	FL-PROOF RD 100 J 1/4W		
K1			SS1-2078-05	MAGNETIC RELAY		
D1 -52			1SS133	DIODE		
D1 -52			1SS176	DIODE		
D53			HZS5.1N(B2)	ZENER DIODE		
D53			RD5.1ES(B2)	ZENER DIODE		
D54			HZS3.3N(B2)	ZENER DIODE		
D54			RD3.3ES(B2)	ZENER DIODE		
D55 ,56			RD18ES(B)	ZENER DIODE		
D57			HZS6.2N(B2)	ZENER DIODE		
D57			RD6.2ES(B2)	ZENER DIODE		
D58			1SS133	DIODE		
D58			1SS176	DIODE		
D59 ,60			HZS6.8N(B2)	ZENER DIODE		
D59 ,60			RD6.8ES(B2)	ZENER DIODE		
D61			HZS5.1N(B2)	ZENER DIODE		
D61			RD5.1ES(B2)	ZENER DIODE		
D62 ,63			1SS131	DIODE		
D62 ,63			1SS178	DIODE		
D64 ,65			HZS6.2N(B2)	ZENER DIODE		
D64 ,65			RD6.2ES(B2)	ZENER DIODE		
D66 -68			1SS131	DIODE		
D66 -68			1SS178	DIODE		
D69			RD4.7ES(B)	ZENER DIODE		
D70			HZS5.1N(B2)	ZENER DIODE		
D70			RD5.1ES(B2)	ZENER DIODE		
D71			HZS6.2N(B2)	ZENER DIODE		
D71			RD6.2ES(B2)	ZENER DIODE		
D76 ,77			1SS133	DIODE		
D76 ,77			1SS176	DIODE		
IC1			MS218P-A	IC(8P AMP X2)		
IC1			NJM4558D-A	IC(8P AMP X2)		
IC2			TC9164N	IC(16CH BILATERAL SELECTOR SW)		
IC3			TC9163N	IC(BILATERAL SWITCH X16)		
IC4		*	TC9162N	IC(ANALOG SWITCH ARRAY)		
IC5			MS218P-A	IC(8P AMP X2)		
IC5			NJM4558D-A	IC(8P AMP X2)		
IC6			LC7522	IC(7CH GRAPHIC EQUALIZER)		

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IC7 ,8 IC9 IC9 IC10,11 IC12			M5229P M5218P-A NJM4558D-A CXD1120P-1 UPC78M15H	IC(7CH GRAPHIC EQUALIZER) IC(OP AMP X2) IC(OP AMP X2) IC(ELECTRONIC VOLUME) IC(VOLTAGE REGULATOR/ +15V)		
Q1 ,2 Q3 -6 Q7 -10 Q11 Q13 ,14			2SC2878 2SK163(L,M) 2SC2878 2SA733(A)(Q,P) 2SC945(A)(Q,P)	TRANSISTOR FET TRANSISTOR TRANSISTOR TRANSISTOR		
Q15 ,16 Q17 ,18 Q19 Q20 Q21 ,22			2SC1845(F,E) 2SC2878 2SC945(A)(Q,P) 2SA733(A)(Q,P) 2SC1845(F,E)	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR		
Q23 ,24 Q25 ,26 Q27 Q28 Q29		*	2SC2878 2SB941(Q,P) 2SD1929 2SA733(A)(Q,P) 2SA992(F,E)	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR		
Q30 Q31 ,32 Q33 ,34 Q35 Q36			2SD1266(Q,P) 2SA733(A)(Q,P) 2SD1266(Q,P) 2SA992(F,E) 2SC2003(L,K)	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR		
Q37 ,38 Q39 ,40 Q41 ,42			2SC3419(Y) 2SC2922*5 2SA1216*5	TRANSISTOR TRANSISTOR TRANSISTOR		
DISPLAY UNIT (X14-213X-XX) 0-10 : K, P 0-81 : U, UE 2-72 : E						
D8 C1 C2 -4 C5 C7 C8	3B		B30-0431-05 C91-0769-05 C91-0745-05 CE04CW1A101M CE04CW1V220M CE04CW1A101M	LED(LN21CPH) POWER STAND BY CERAMIC 0.01UF M CERAMIC 100PF K ELECTRO 100UF 10WV ELECTRO 22UF 35WV ELECTRO 100UF 10WV		
C9 C10 ,11 C12 C13 C14 ,15		*	C91-0759-05 C91-0745-05 CE04JW0J100M CE04CW1A101M CE04JW1C4R7M	CERAMIC 0.0015UF M CERAMIC 100PF K ELECTRO 10UF 6.3WV ELECTRO 100UF 10WV ELECTRO 4.7UF 16WV		
C16 C17 C21 C23 C24 -30			CE04JW0J100M CF92FV1H104J CE04LW1H010M CE04LW1V4R7M CE04LW1H010M	ELECTRO 10UF 6.3WV MF 0.10UF J ELECTRO 1.0UF 50WV ELECTRO 4.7UF 35WV ELECTRO 1.0UF 50WV	KP	
C24 ,25 C26 C27 C28 -30 C31 ,32			CE04LW1H010M CE04CW1H010M CE04LW1H010M CE04CW1H010M CF92FV1H104J	ELECTRO 1.0UF 50WV ELECTRO 1.0UF 50WV ELECTRO 1.0UF 50WV ELECTRO 1.0UF 50WV MF 0.10UF J	UUEE UUEE UUEE UUEE	
C33 ,34 C35 ,36 C37 C38 ,39			CF92FV1H682J CF92FV1H153J CC45FSL1H271J CK45FB1H471K	MF 6800PF J MF 0.015UF J CERAMIC 270PF J CERAMIC 470PF K		

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C40 ,41 C42 ,43 C44 ,45 C51 ,52 C53			CF92FV1H102J CF92FV1H272J CF92FV1H473J CED4LW1C470M CED4LW0J471M	MF 1000PF J MF 2700PF J MF 0.047UF J ELECTR0 47UF 16WV ELECTR0 470UF 6.3WV		
C54 C55 C56 ,57 C58 C61		*	CED4LW1V100M CED4LW0J471M CED4LW1V100M CED4LW0J471M CF92FV1H104J	ELECTR0 10UF 35WV ELECTR0 470UF 6.3WV ELECTR0 10UF 35WV ELECTR0 470UF 6.3WV MF 0.10UF J		
C62 C63 C64 C65 C66			CF92FV1H333J CED4LW1C470M CED4LW0J222M C90-1416-05 CED4LW1H010M	MF 0.033UF J ELECTR0 47UF 16WV ELECTR0 2200UF 6.3WV ELECTR0 18UF 5.5WV ELECTR0 1.0UF 50WV	UUE	
E1 -3 L1 X1 X1	1D	*	E13-0291-05 L40-1021-14 L78-0209-05 L78-0218-05	PHONE JACK (MONITOR OUT,VIDEO) SMALL FIXED INDUCTOR(1.0MH,K) RESONATOR (4.194MHZ) RESONATOR		
CP1 ,2 CP3 CP4 CP5 CP6		*	R90-0461-05 R90-0227-05 R90-0453-05 R90-0483-05 R90-0465-05	MULTI-COMP 47KX6 J 1/6W MULTI-COMP 4.7KX6 J 1/6W MULTI-COMP 4.7K J 1/6W MULTI-COMP 100KX13 J 1/6W MULTI-COMP 100K13 J 1/6W		
CP7 CP8 ,9 CP10 CP11 R105		*	R90-0278-05 R90-0482-05 R90-0484-05 R90-0482-05 RS14KB3A271J	MULTI-COMP 100KX7 J 1/6W MULTI-COMP 100KX4 J 1/6W MULTI-COMP 4.7KX12 J 1/6W MULTI-COMP 100KX4 J 1/6W FL-PROOF RS 270 J 1W		
R169 VR1			RD14GB2E150J R12-1070-05	FL-PROOF RD 15 J 1/4W TRIMMING PNT. (1K) SPECTRUM	UUE	
S1 S2 S3 -32 S3 -53 S34 -53	1A,2B		S40-1064-05 S40-1064-05 S40-1064-05 S40-1064-05 S40-1064-05	PUSH SWITCH (POWER,VOL,ETC) PUSH SWITCH PUSH SWITCH PUSH SWITCH PUSH SWITCH	E KPUUE E	
S54 S55 -61 S62 -68 S69 -80			S40-1064-05 S40-1064-05 S40-1064-05 S40-1064-05	PUSH SWITCH PUSH SWITCH PUSH SWITCH PUSH SWITCH		
D1 -7 D1 -7 D9 -12 D9 -12 D15			1SS133 1SS176 1SS133 1SS176 1SS133	DIODE DIODE DIODE DIODE DIODE		
D15 D17 -37 D17 -37 D38 -47 D38 -47			1SS176 1SS133 1SS176 1SS131 1SS178	DIODE DIODE DIODE DIODE DIODE	KPUUE	
D38 ,39 D38 ,39 D41 -47			1SS131 1SS178 1SS131	DIODE DIODE DIODE	E	

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D41 -47 D48 -54 D48 -54 D61 D61			1SS178 1SS133 1SS176 HZS6.8N(B2) RD6.8ES(B2)	DIODE DIODE DIODE ZENER DIODE ZENER DIODE	E	
D62 D62 D65 -72 D65 -72 D73			1SS133 1SS176 1SS133 1SS176 HZS6.2N(B2)	DIODE DIODE DIODE DIODE ZENER DIODE		
D73 D81 -98 D81 -98 D99 D99			RD6.2ES(B2) 1SS133 1SS176 HZS5.6N(B2) RD5.6ES(B2)	ZENER DIODE DIODE DIODE ZENER DIODE ZENER DIODE		
D100 D100 D111-118 D111-118 FL1	2A	*	HZS2.7N(B2) RD2.7ES(B2) 1SS133 1SS176 FIP20AMW30	ZENER DIODE ZENER DIODE DIODE DIODE FLUORESCENT INDICATOR TUBE		
IC1 IC2 -5 IC6 IC7 IC8 ,9		*	UPD75108CW-041 UPA80C UPD6300C LC7565 LB1294	IC(MICROPROCESSOR) IC(7CH TRANSISTOR ARRAY) IC(FL LATCH DRIVER) IC(GRAPHIC EQ FL DISPLAY DR) IC(6CH DARLINGTON DRIVER)		
IC10,11 IC12,13 IC14-17 Q1 -4 Q7			UPD4001BC UPD4066BC AN6556 DTA143EFF 2SC945(A)(Q,P)	IC(NOR X6) IC(BILATERAL SWITCH X4) IC(OP AMP X2) DIGITAL TRANSISTOR TRANSISTOR		
Q8 -10 Q11 Q12 Q13 Q13			2SA999(E,F) 2SC1845(F,E) 2SC945(A)(Q,P) 2SC2003(L,K) 2SD1266	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR	KPE UUE	
Q14 E4	3B		2SC945(A)(Q,P) W02-0692-05	TRANSISTOR ELECTRIC CIRCUIT MODULE		
<b>FM FRONT-END ASS'Y (W02-0699-05) : K, P, U, UE</b>						
D1 -3 TR1 TR2 ,3 TR4			1SV110 2SK439 2SC3391 2SC3494	DIODE TRANSISTOR TRANSISTOR TRANSISTOR		
<b>FM FRONT-END ASS'Y (W02-0700-05) : E</b>						
D1 -4 TR1 TR2 ,3 TR2 ,3 TR4			1SV110 3SK85 2SC3391 2SC535 2SC2839	DIODE TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR		
TR5 TR5			2SK241 2SK439	TRANSISTOR TRANSISTOR		

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## SPECIFICATIONS

### AUDIO SECTION

#### Power Output

(Front)

130 watts per channel minimum RMS, both channel driven at 8 ohms from 20 Hz to 20,000 Hz with no more than 0.008% total harmonic distortion

(Rear)

10 watts per channel minimum RMS, both channel driven at 8 ohms from 70 Hz to 10 kHz with no more than 0.9 % total harmonic distortion

(Front)

140 watts per channel minimum RMS, both channel driven into 8 ohms at 1kHz with no more than 0.008 % total harmonic distortion

#### Total Harmonic Distortion

(1 kHz, 8 ohms)..... 0.002% at 130 W

Intermodulation Distortion..... 0.008 % at 130 W

#### Input Sensitivity/Impedance

PHONO (MM)..... 3.0 mV/47 kohms

PHONO (MC)..... 0.3 mV/100 ohms

CD/AUX, TAPE..... 200 mV/47 kohms

VIDEO..... 250 mV/47 kohms

#### Frequency Response

TAPE, CD/AUX, VIDEO..... 10 Hz - 200,000 Hz... +0 dB, -3 dB

#### Signal to Noise Ratio

PHONO (MM)..... 82 dB

PHONO (MC)..... 63 dB

CD/AUX, TAPE..... 100 dB

VIDEO..... 90 dB

#### Graphic Equalizer

Center Frequency..... 60 Hz, 150 Hz, 400 Hz, 1 kHz, 2.4 kHz, 6 kHz, 15kHz

Control Range.....  $\pm 12$  dB

### VIDEO SECTION

Inputs/Outputs VIDEO 1,2,3..... 1 Vp-p, 75 ohms unbalanced

### FM TUNER SECTION

Tuning Frequency Range..... 87.5 MHz - 108 MHz

Antenna Impedance..... 75 ohms unbalanced

Usable Sensitivity..... 10.8 dBf (0.95  $\mu$ V)

#### 50 dB Quieting Sensitivity

MONO..... 14.2 dBf (1.4  $\mu$ V)

STEREO..... 37.2 dBf (20  $\mu$ V)

#### Signal to Noise Ratio at 65 dBf

MONO..... 80 dB

STEREO..... 74 dB

#### Total Harmonic Distortion at 1,000 Hz

MONO..... 0.07%

STEREO..... 0.1%

Frequency Response..... 30 Hz - 15,000 Hz +0.5 dB, -2 dB

#### Stereo Separation

50 dB at 1,000 Hz

Selectivity..... 55 dB at 400 kHz

#### Capture Ratio

1.0 dB

#### Image Rejection Ratio

43 dB

#### IF Rejection Ratio

86 dB

#### Spurious Rejection Ratio

83 dB

#### AM Suppression Ratio

62 dB

### AM TUNER SECTION

#### Tuning Frequency Range

530 kHz - 1,610 kHz

(with the AM tuning interval set at 10 kHz)

531 kHz - 1,602 kHz

(with the AM tuning interval set at 9 kHz)

Usable Sensitivity..... 10  $\mu$ V (400  $\mu$ V/m)

Signal to Noise Ratio..... 50 dB

Total Harmonic Distortion..... 0.3 %

Selectivity..... 25 dB

### GENERAL

Power Consumption..... 4.8A... USA Model/400 W... others

Dimensions..... 420(W)  $\times$  133(H)  $\times$  369(D) mm

(16-9/16"  $\times$  5-1/4"  $\times$  14-1/2")

Weight (Net)..... 11.5kg (25.4 lb)

**Note:** We follow a policy of continuous advancements in development. For this reason specifications may be changed without notice.

### Note :

Component and circuitry are subject to modification to insure best operation under differing local conditions. This manual is based on, the U.S.A. (K) standard, and provides information on regional circuit modification through use of alternate schematic diagrams, and information on regional component variations through use of parts list.

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